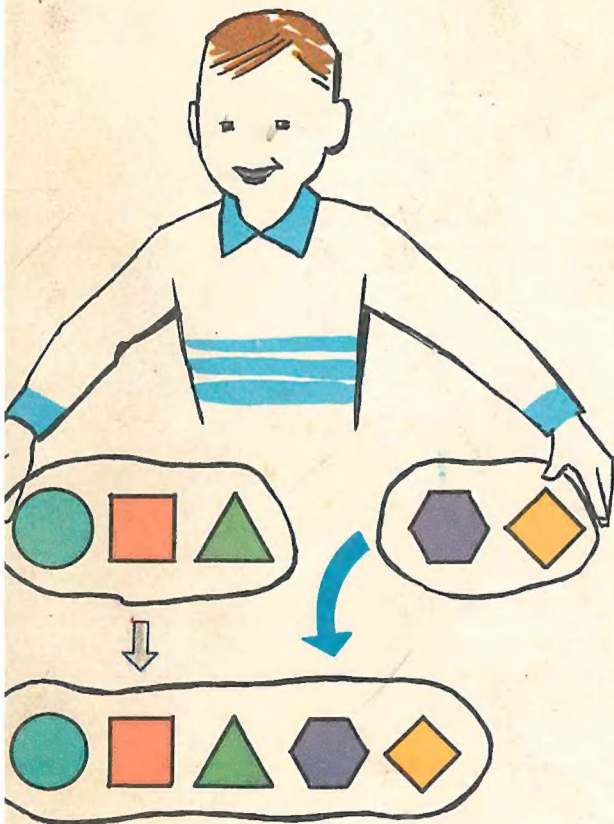


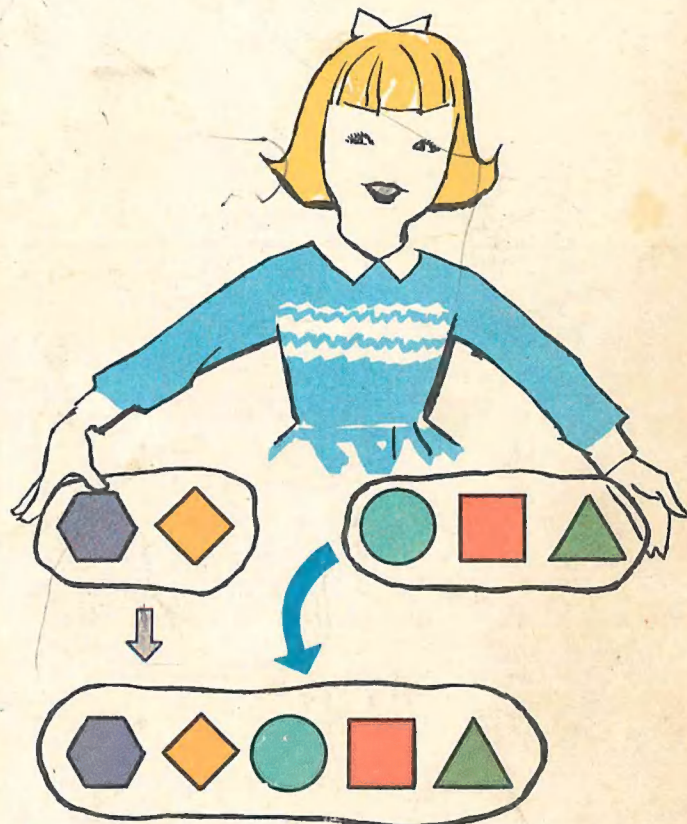
Sets · Numbers Numeralals

Second
Edition

2



$$3 + 2 = 5$$



$$2 + 3 = 5$$

$$3 + 2 = 2 + 3$$

THE LAIDLAW MATHEMATICS SERIES

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Sets • Numbers Numerals

Second
Edition

2

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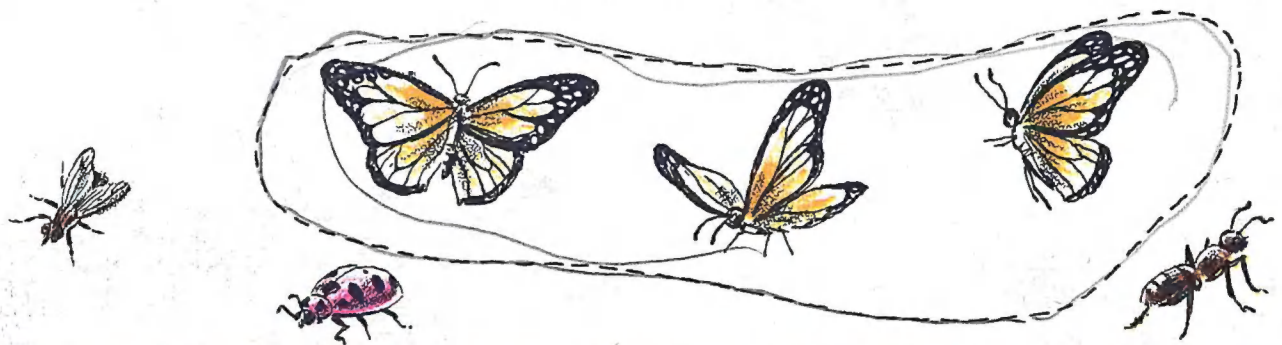
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Recognition of Sets

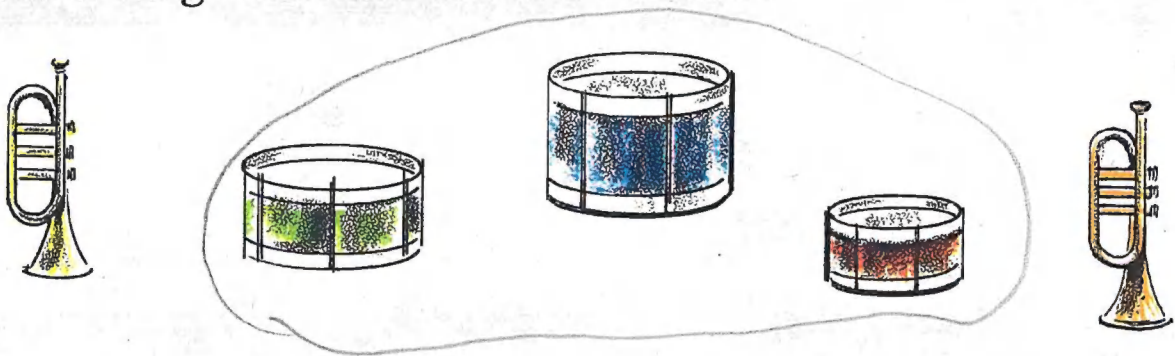


Recognition of Sets

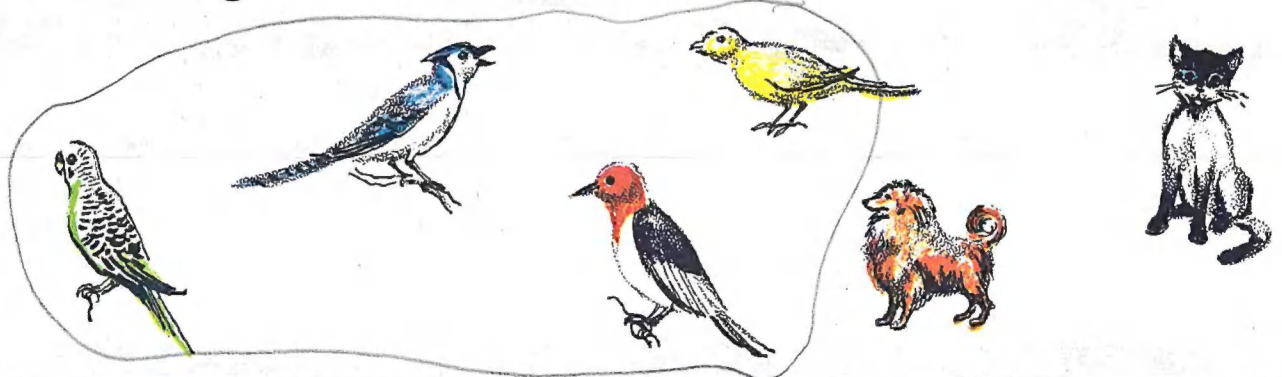
Draw a ring around the set of butterflies.



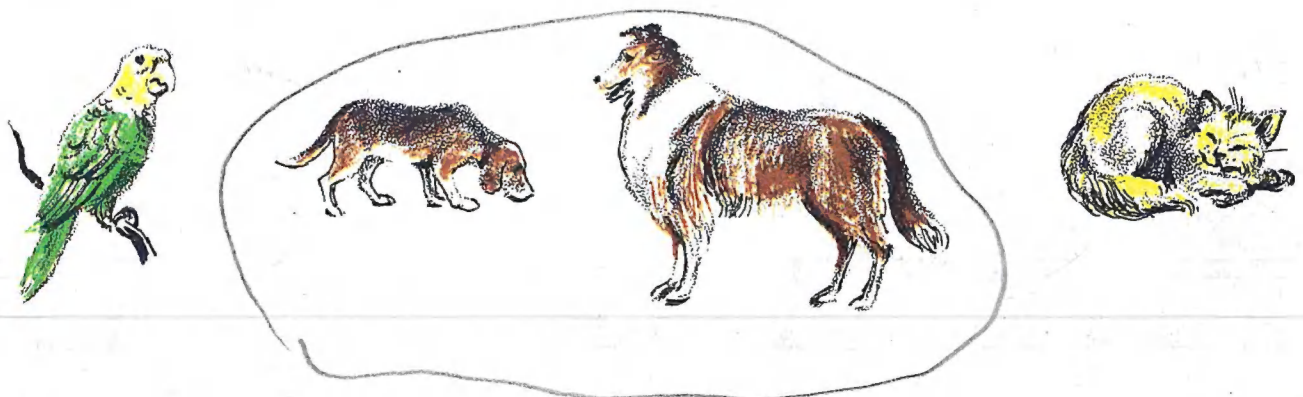
Draw a ring around the set of drums.



Draw a ring around the set of birds.

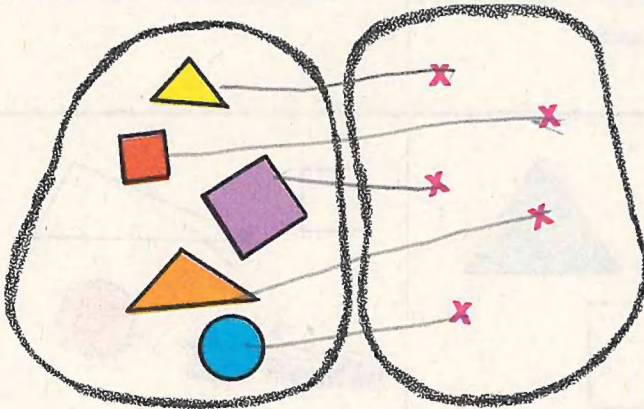
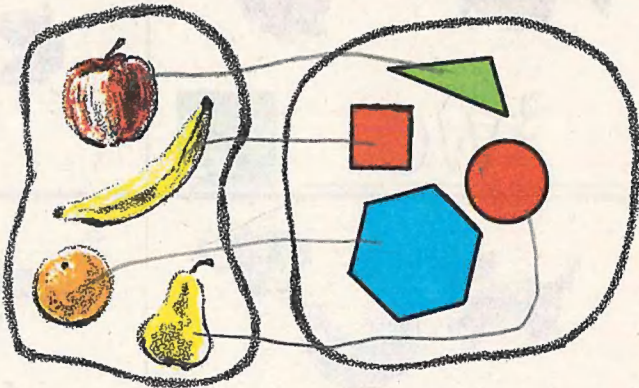
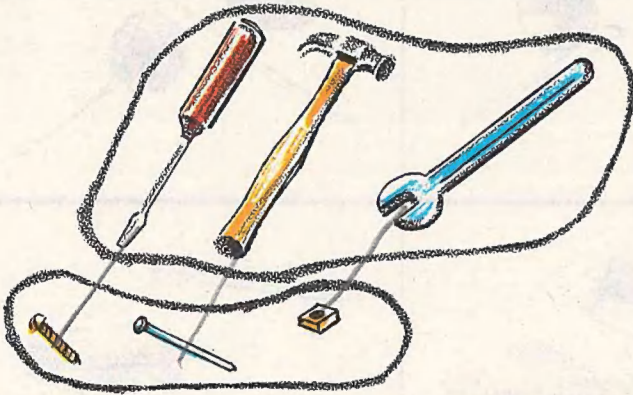
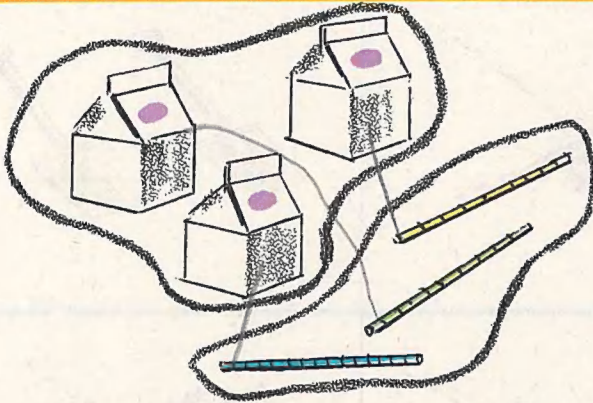
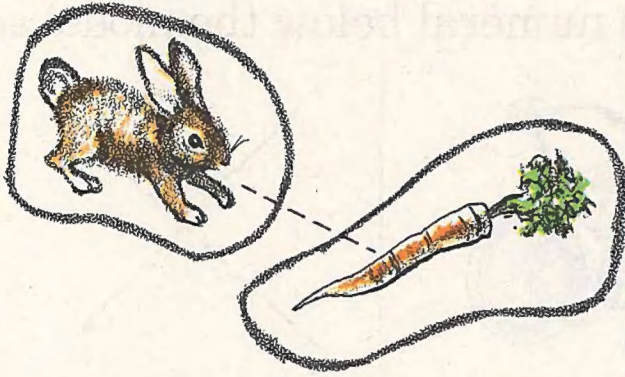


Draw a ring around the set of dogs.



Equivalent Sets




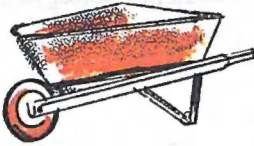


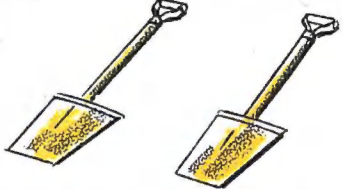


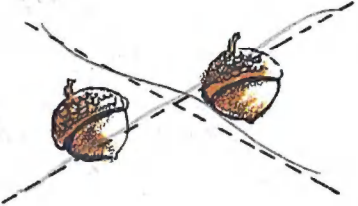



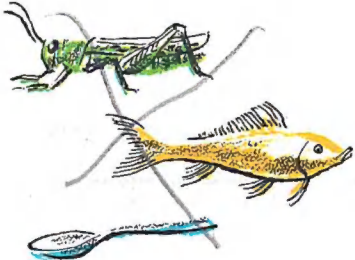



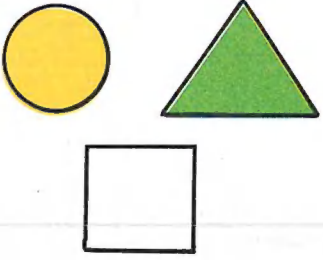
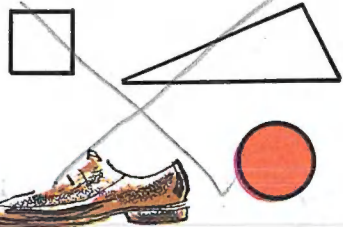
Draw lines to show one-to-one matchings.



Number—Cardinal Concept

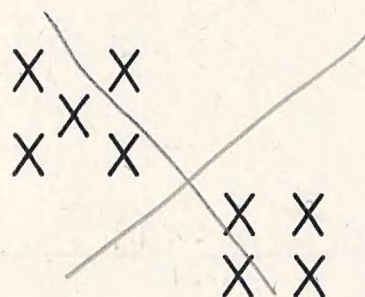
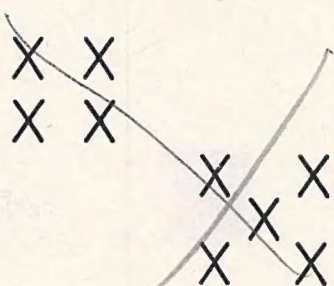
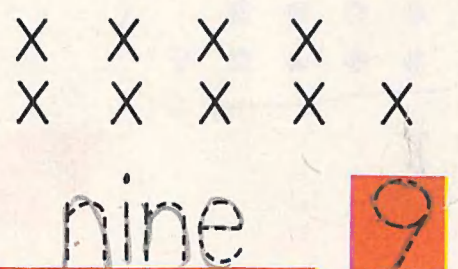
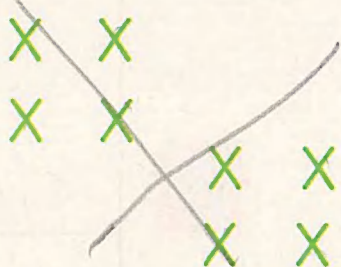
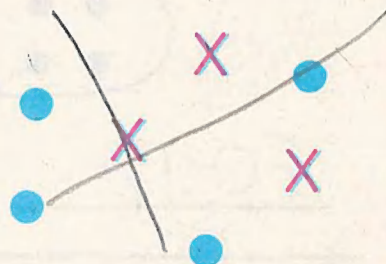
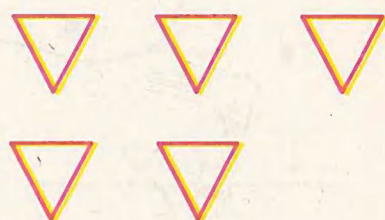
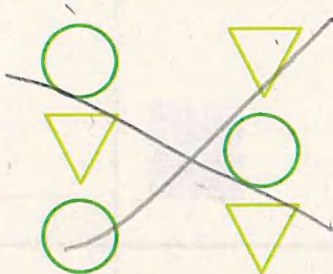
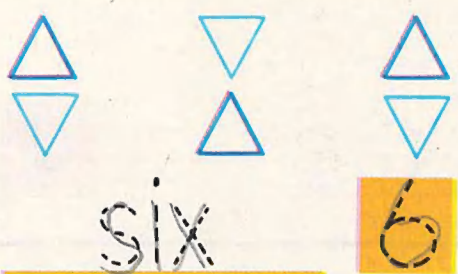
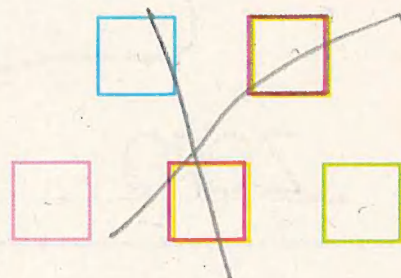
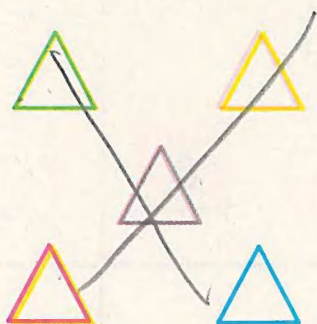
A

Mark an X on each set having the number of the model set.
Write the number word and the numeral below the model set.

<p><u>zero</u> </p>		
 <p><u>one</u> </p>		
 <p><u>two</u> </p>		
 <p><u>three</u> </p>		
 <p><u>four</u> </p>		

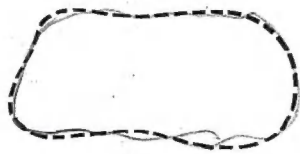
Number—^ACardinal Concept

Mark an X on each set having the number of the model set.
Write the number word and the numeral below the model set.



Numerals and Number Words

Fill in each missing set picture, number word, or numeral.



zero

0



one

1



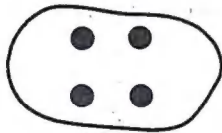
two

2



three

3



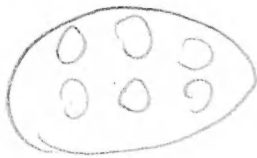
four

4



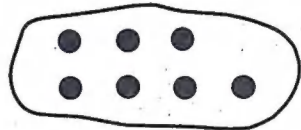
five

5



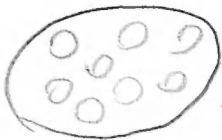
six

6



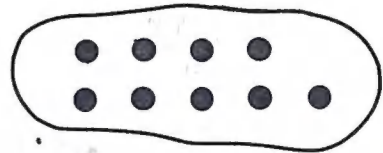
seven

7



eight

8



nine

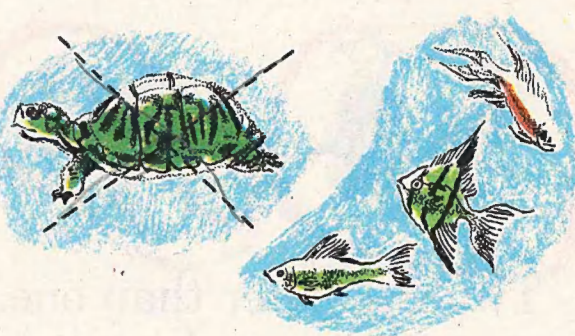
9

Non-Equivalent Sets

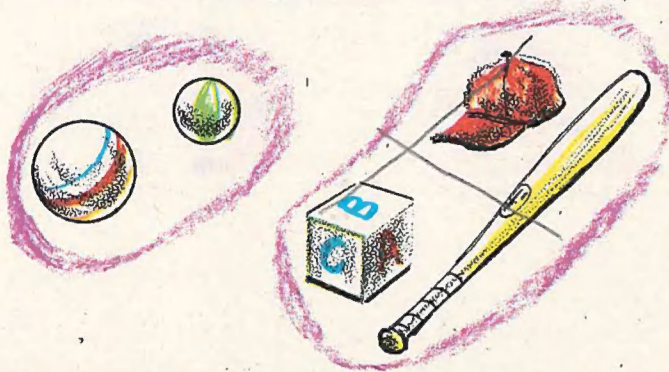
X the set of greater number.



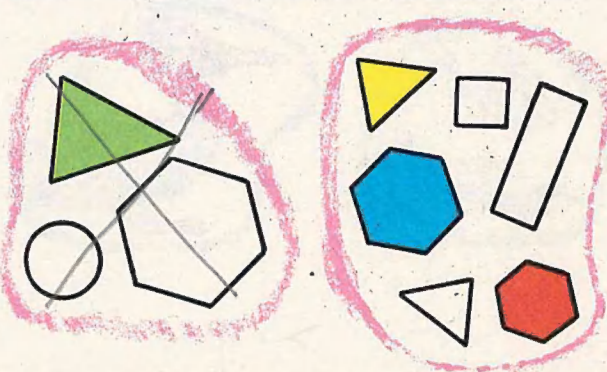
X the set of lesser number.



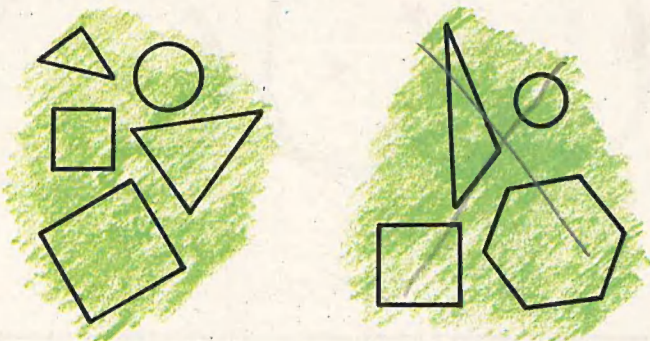
X the set of greater number.



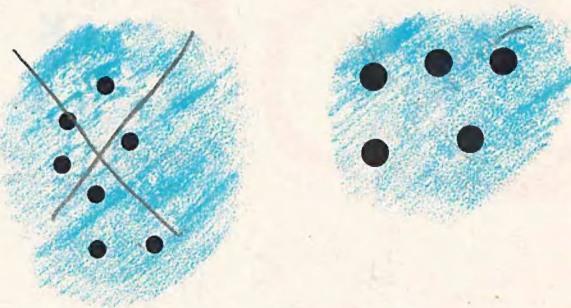
X the set of lesser number.



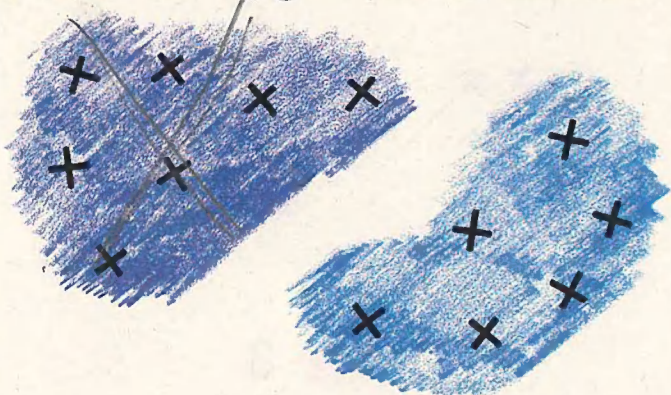
X the set of lesser number.



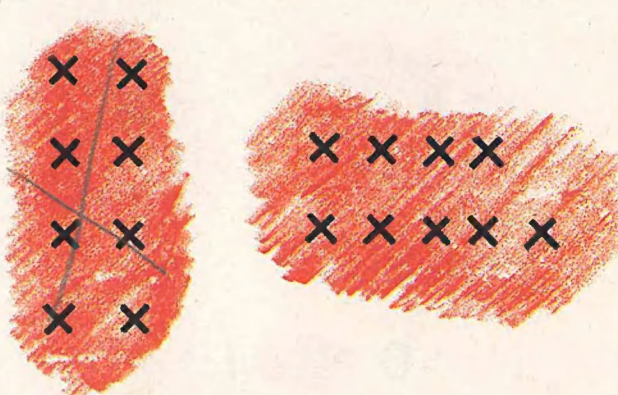
X the set of greater number.



X the set of greater number.



X the set of lesser number.



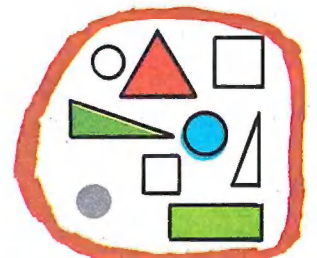
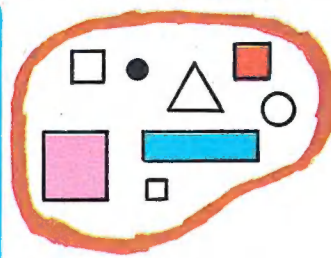
Is Greater Than; Is Less Than

Write the correct numeral above each .



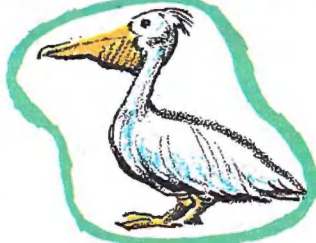
Two is greater than one.

$$2 > 1$$



Eight is less than nine.

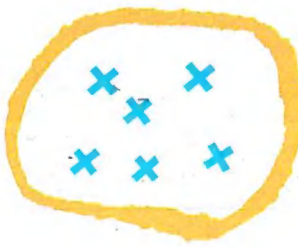
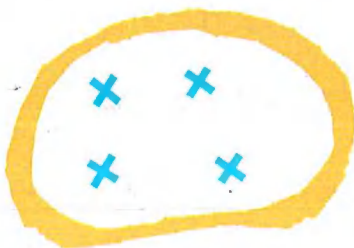
$$8 < 9$$



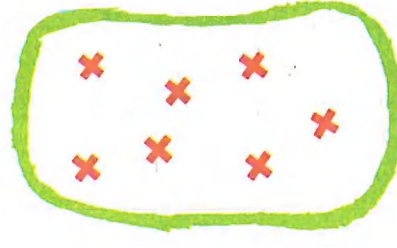
$$2 > 1$$



$$3 < 6$$

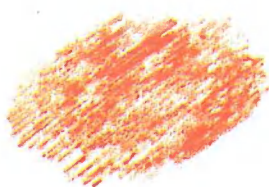


$$4 < 6$$



$$7 > 0$$

Write the correct symbol ($>$ or $<$) in each .



$$0 < 1$$

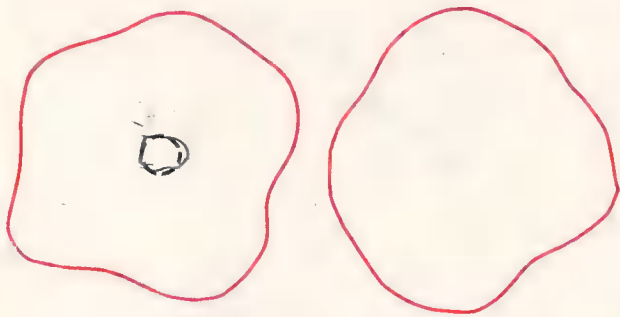


$$9 > 8$$

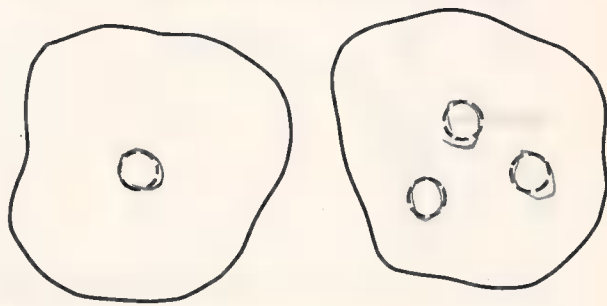
8 (eight)

Is Greater Than; Is Less Than A

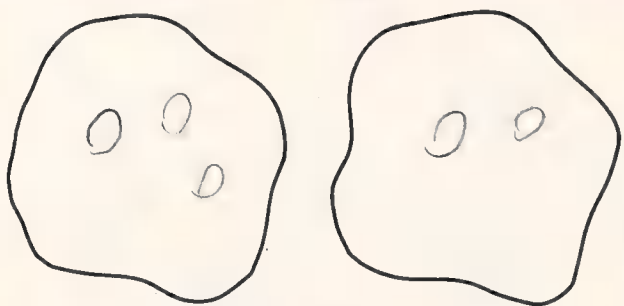
Complete the set pictures to show the number relations.



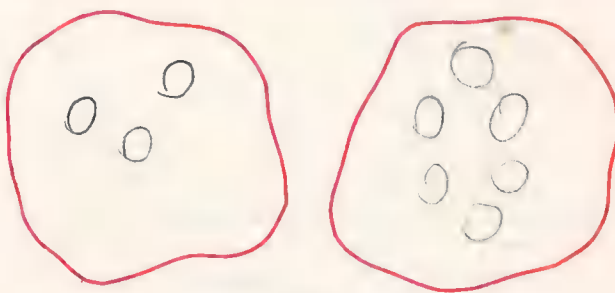
$$1 > 0$$



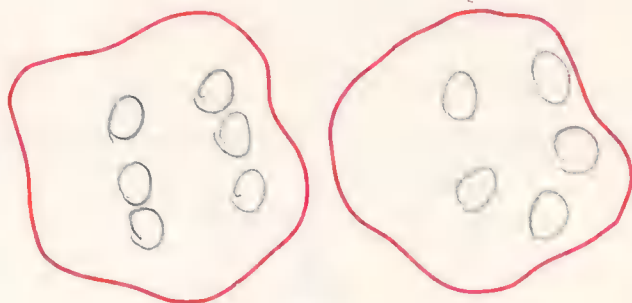
$$1 < 3$$



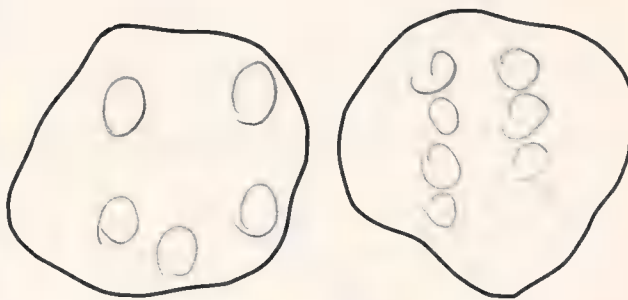
$$3 > 2$$



$$3 < 6$$



$$6 > 5$$



$$5 < 7$$



$$7 > 6$$



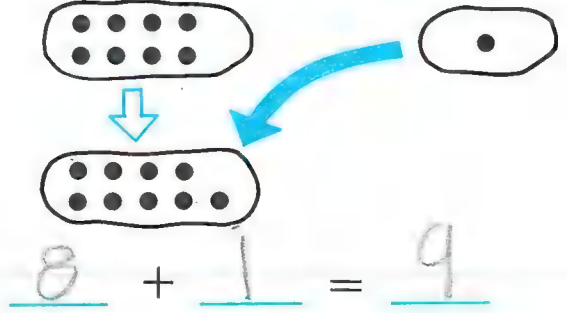
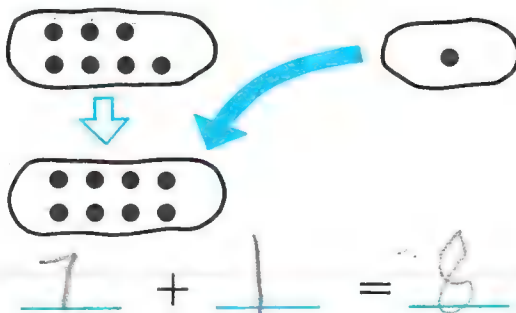
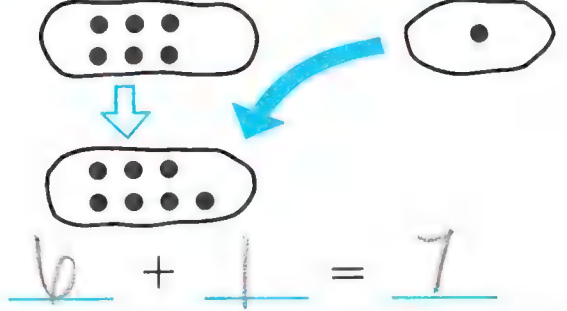
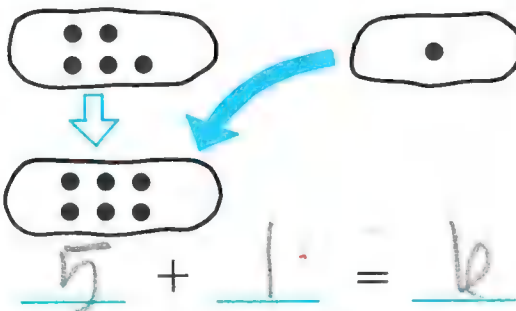
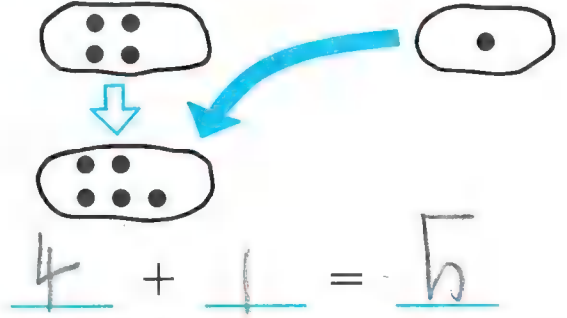
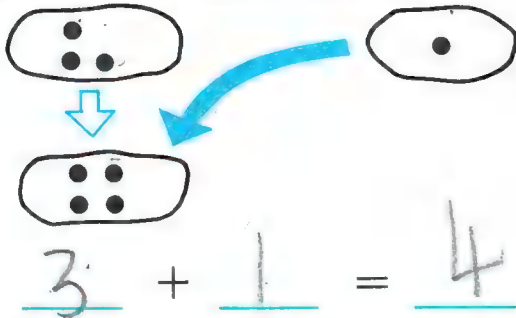
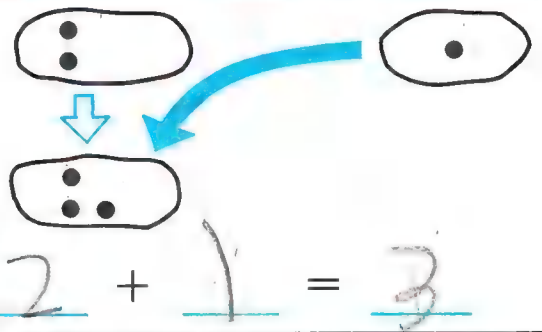
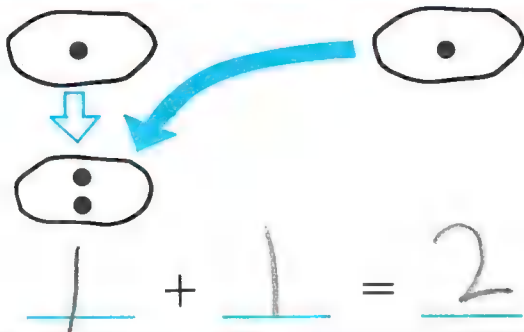
$$8 < 9$$

One More Than

Write the correct numeral above each ____.



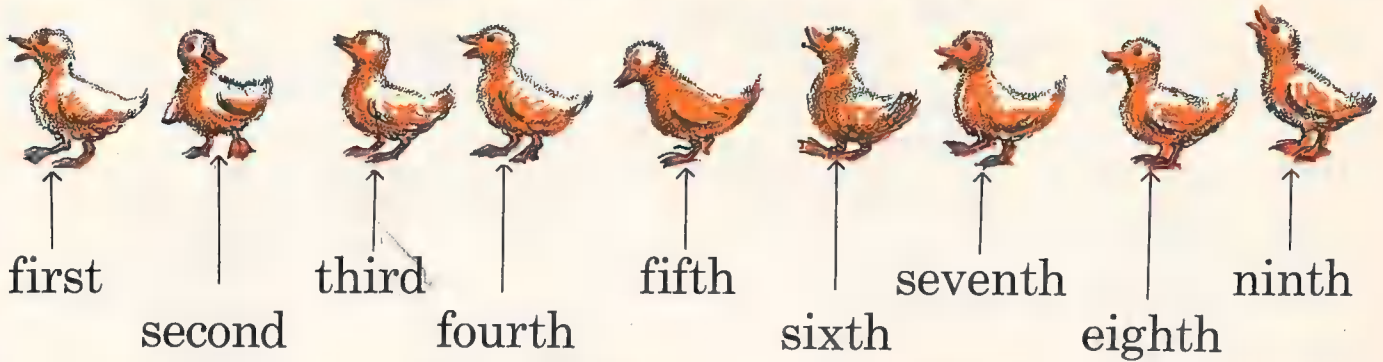
Zero plus one equals one.



Number—Ordinal Concept

Count the ducks from left to right.

Write the correct words above the 9's.



The duck you count as 1 is called the first duck.

The duck you count as 2 is called the second duck.

The duck you count as 3 is called the third duck.

The duck you count as 4 is called the fourth duck.

The duck you count as 5 is called the fifth duck.

The duck you count as 6 is called the sixth duck.

The duck you count as 7 is called the seventh duck.

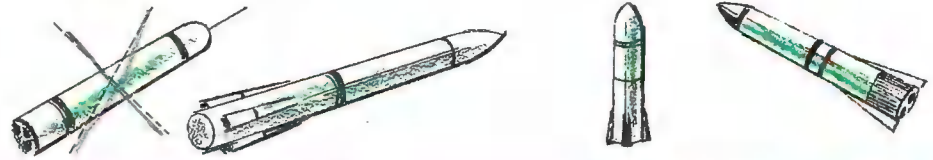
The duck you count as 8 is called the eighth duck.

The duck you count as 9 is called the ninth duck.

Number—Ordinal Concept

Mark an X on the correct picture.

first
from left



fifth
from right



second
from left



fourth
from right



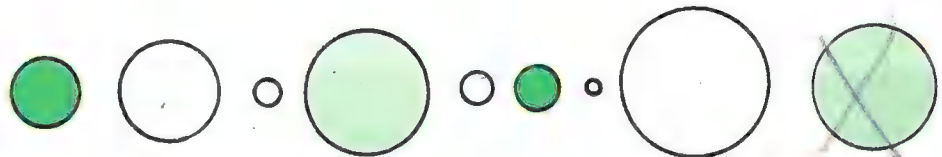
third
from left



eighth
from right



ninth
from left



sixth
from right



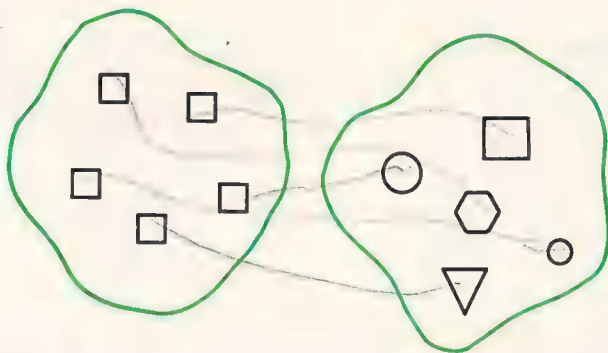
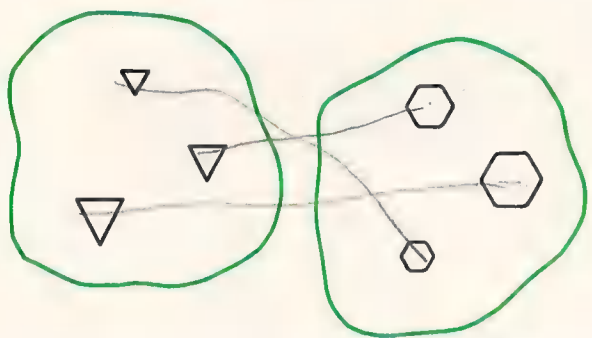
seventh
from left



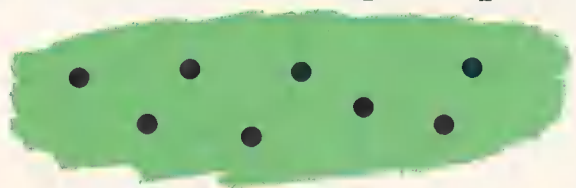
Checkup Time

Draw lines to show one-to-one matchings.

a
or
ok



Fill in each missing set picture, number word, or numeral.



eight

8

four

4

Write a correct numeral in each .

2

>

7

<

5

>

<

6

>

8

<

1

Write the correct numeral in each .

3 + 1 =

5 +

= 6

+ 1 = 9

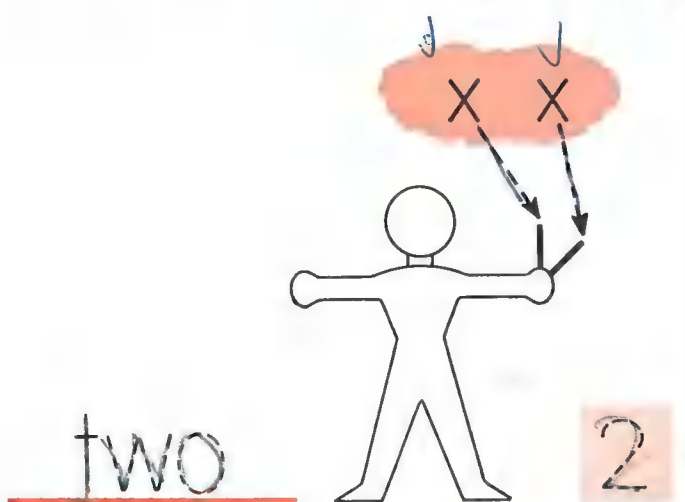
Write the missing number words above the ____'s.

First, second, third, four, fifth,

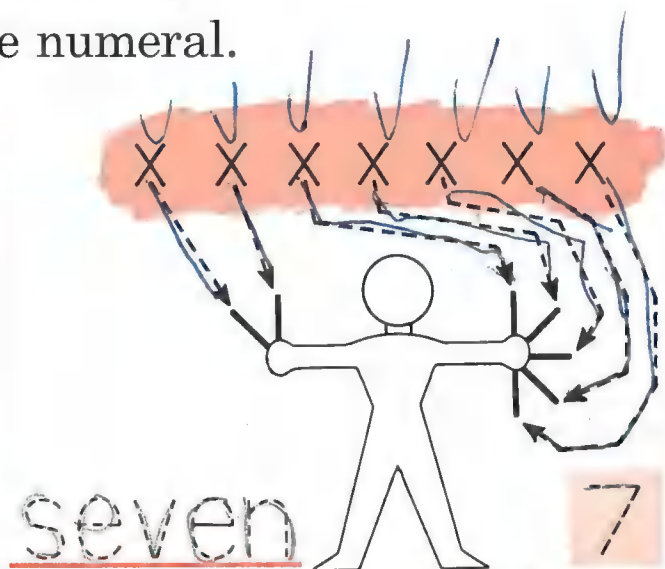
sixth, seventh, eighth, ninth

Base-Ten Numerals 0-9

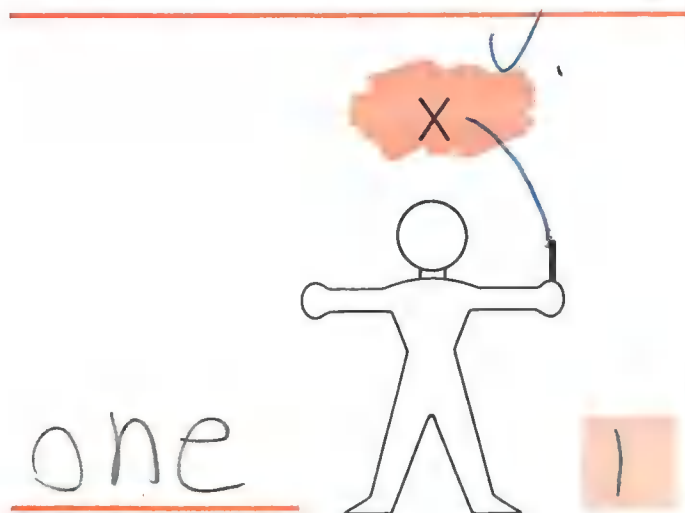
Match the x's with the fingers one-to-one.
Write the number word and the numeral.



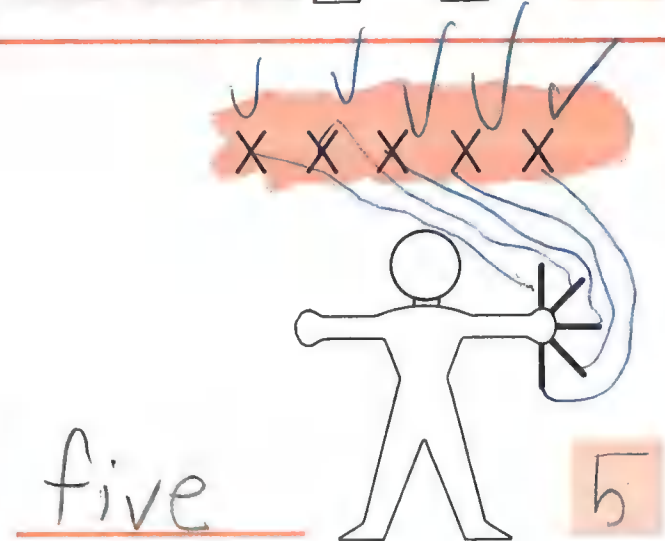
two 2



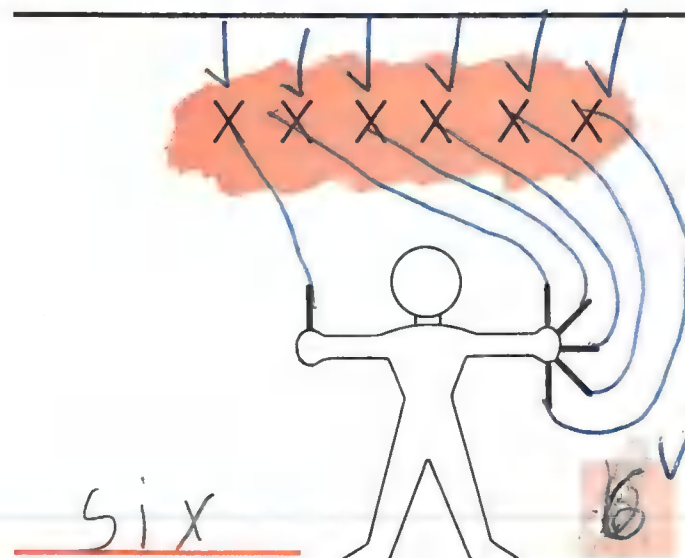
seven 7



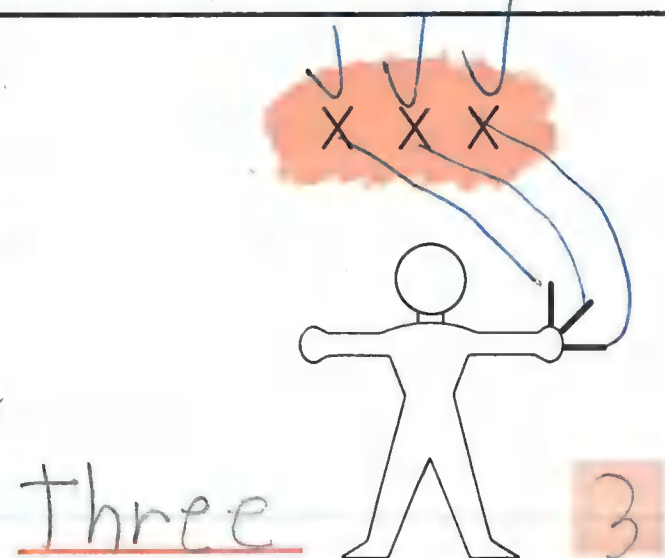
one 1



five 5



six 6



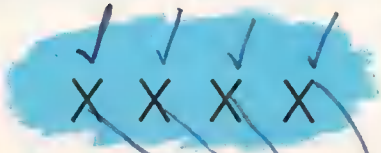
three 3

Base-Ten Numerals 0-9

Match the x's with the fingers one-to-one.

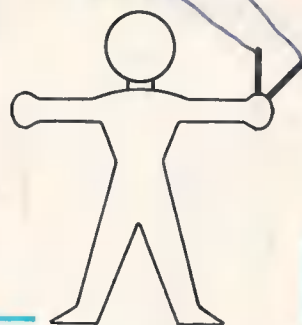
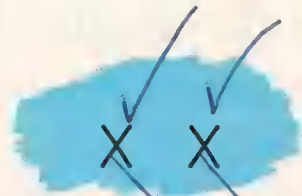
Write the number word and the numeral.

31



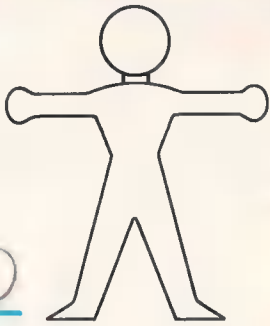
four

4



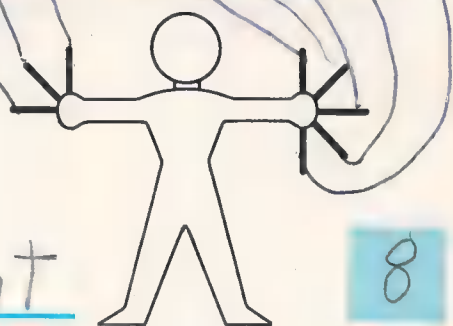
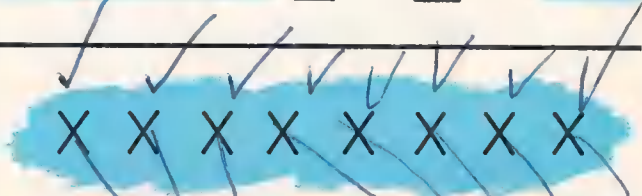
two

2



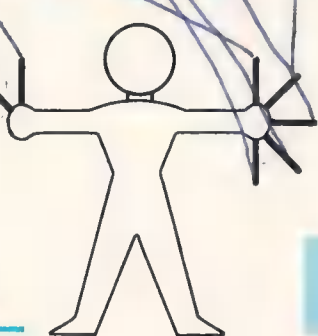
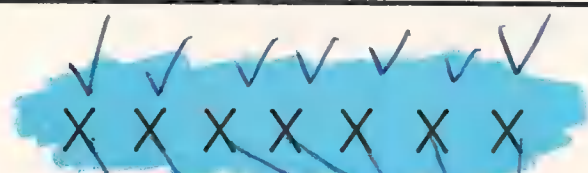
Zero

0



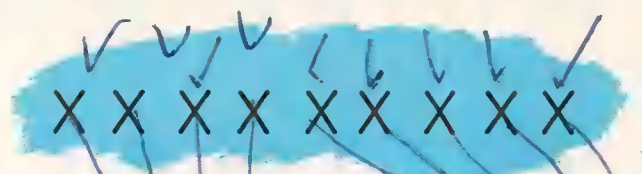
eight

8



seven

7



nine

9

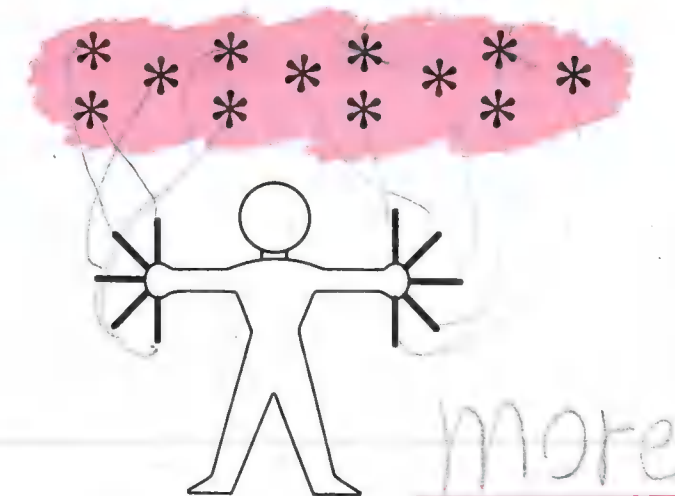
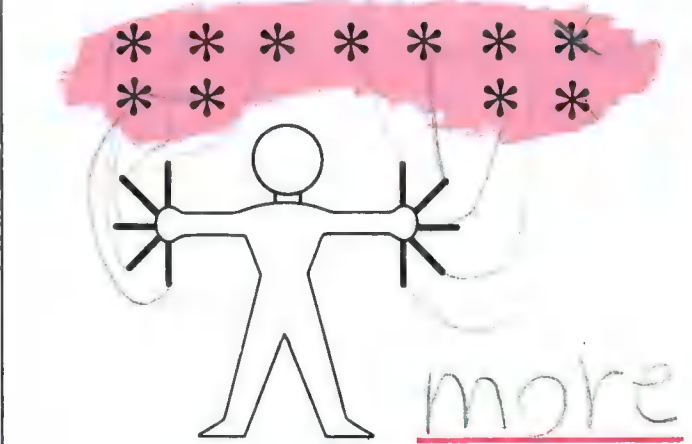
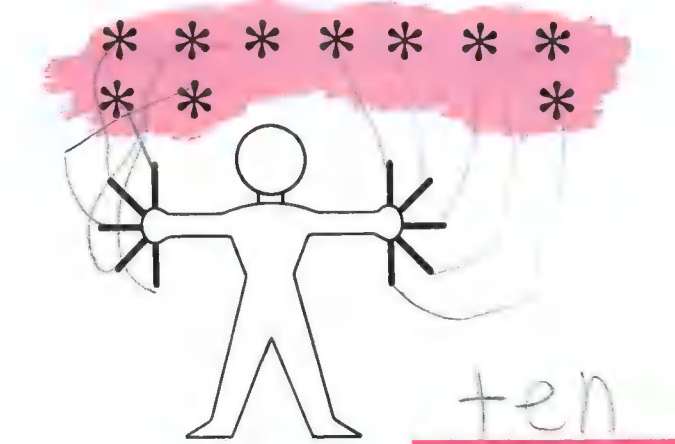
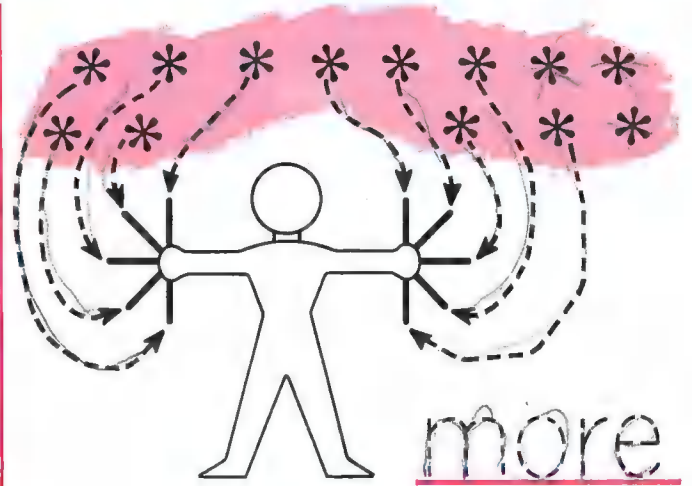
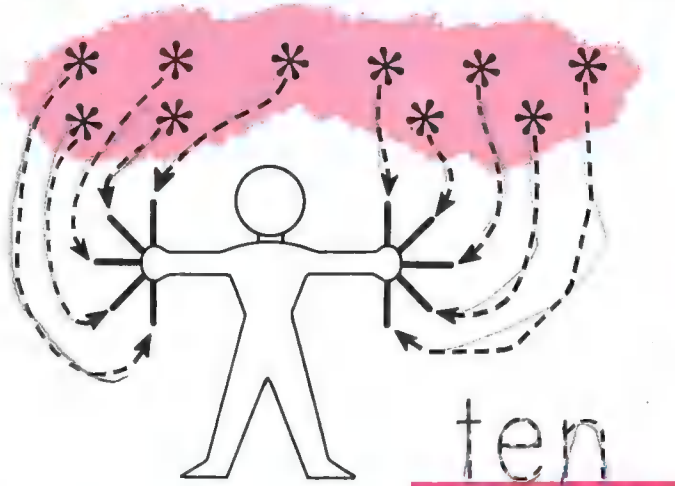
Ten—the All Count

A

Match the *'s with the fingers one-to-one.

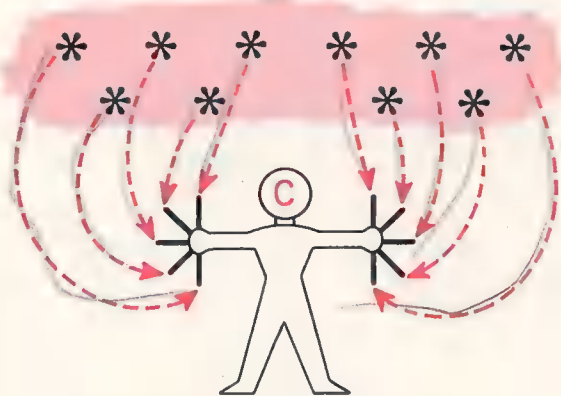
Write the number word **ten** if the sets match.

Write **more** if some *'s cannot be matched.



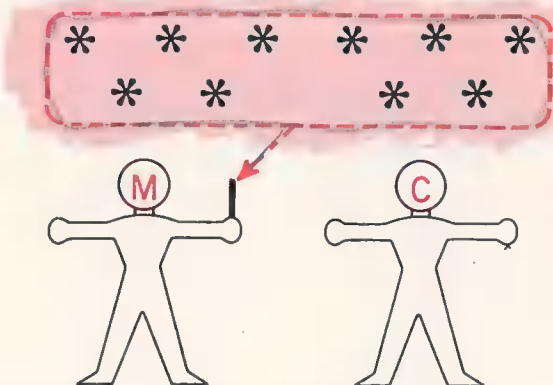
The Number Ten and the Numeral 10

a

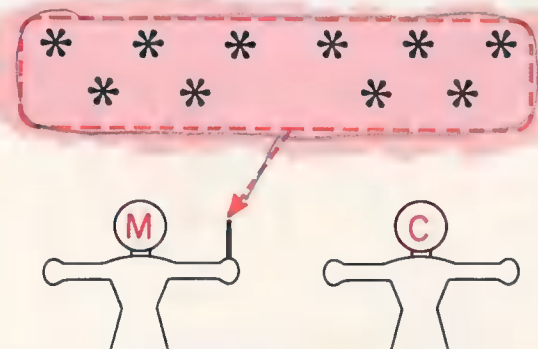


The counting man records
ten ones

We now use a memory man.



He records the ten ones as
one ten



Both men together record

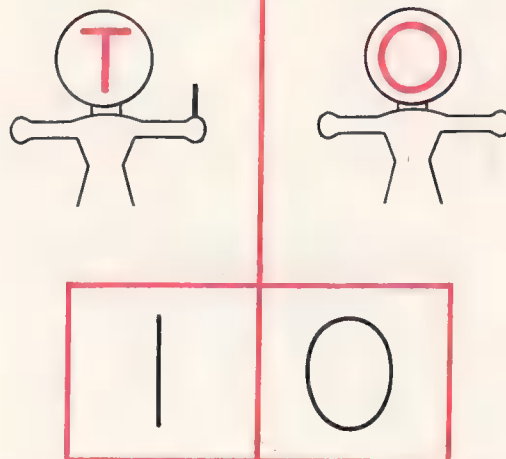
--

 Ten and

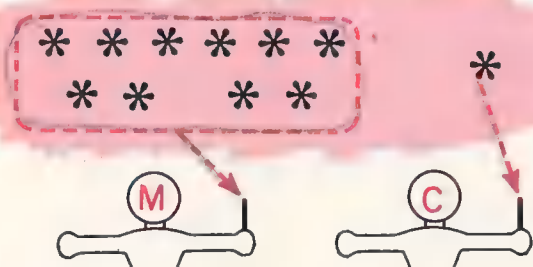
○

 Ones.

They now show



Now the counting man can begin another count.



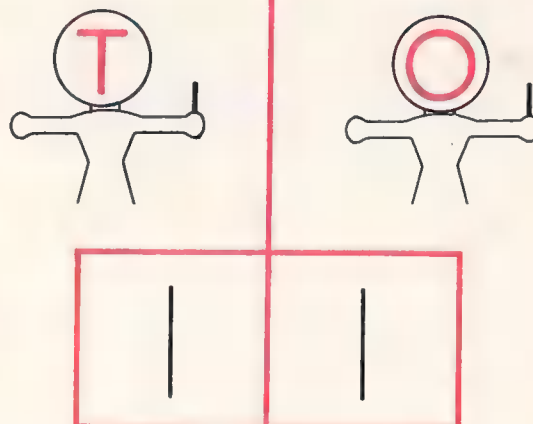
Both men together record

--

 Ten and

--

 One.

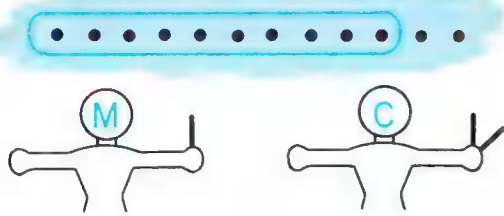


(seventeen) 17

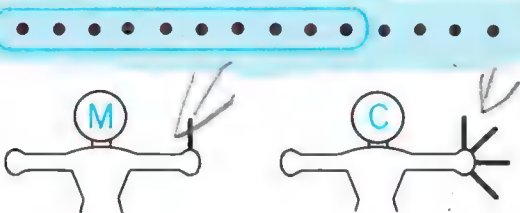
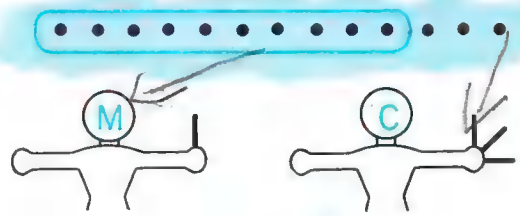
Place Value

a

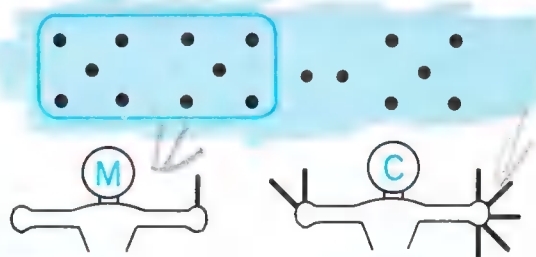
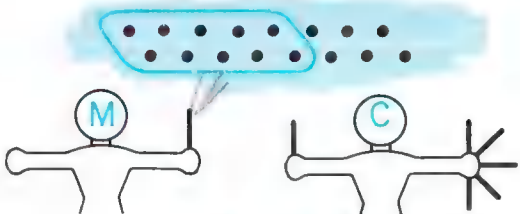
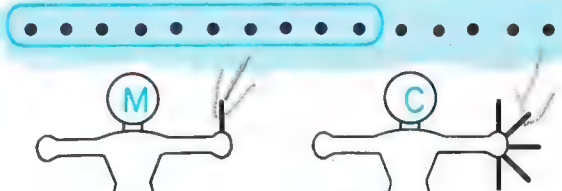
Fill the 's with the correct numerals.



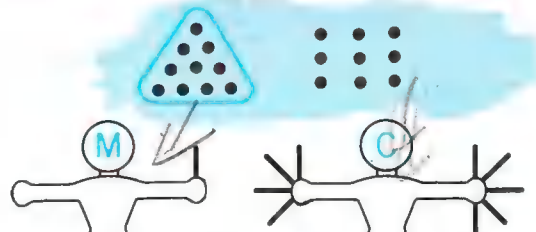
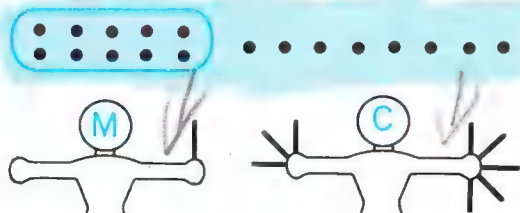
Ten and Ones



Ten and Ones

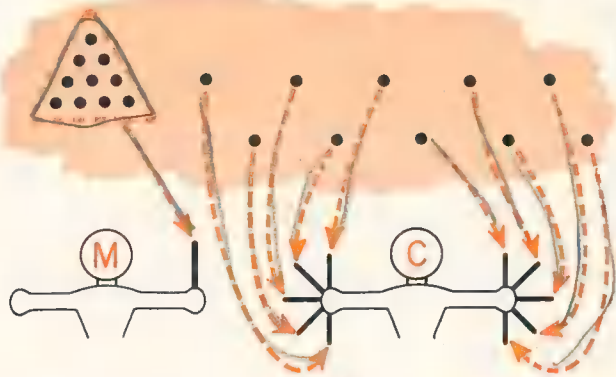


Ten and Ones



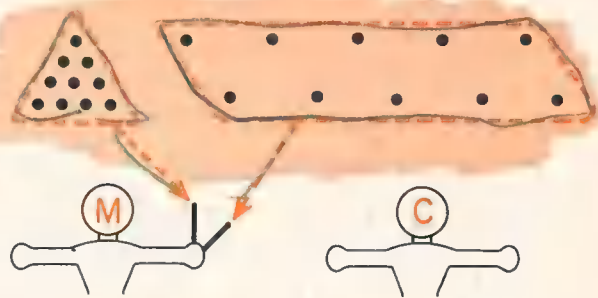
18 (eighteen)

Place Value

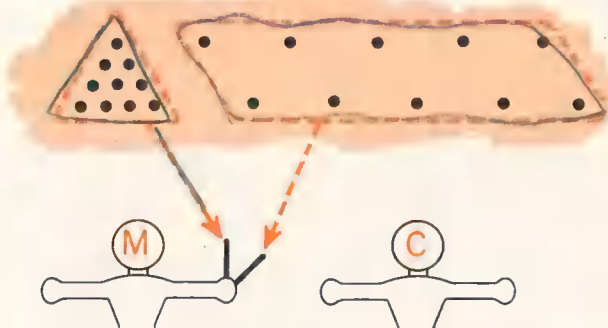


The M man and C man show one Ten and ten Ones.

The other ten is recorded.

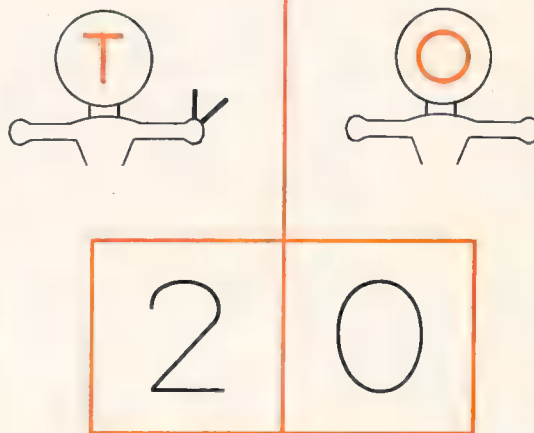


The M man now shows two tens

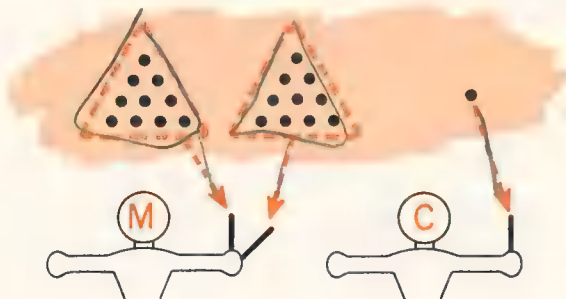


The M man and C man show 2 Tens and 0 Ones.

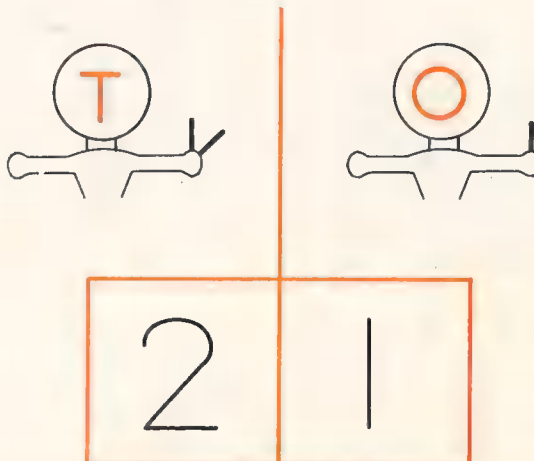
They now show



The counting man can begin another count.



The M man and C man show 2 Tens and 1 One.



(nineteen) 19

Place Value

a

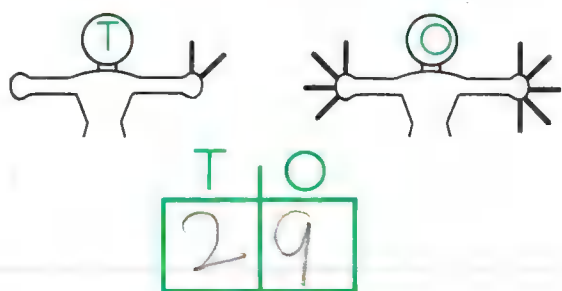
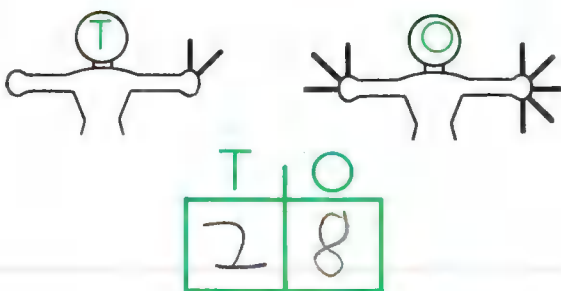
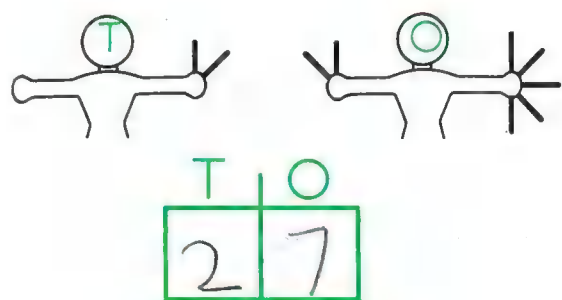
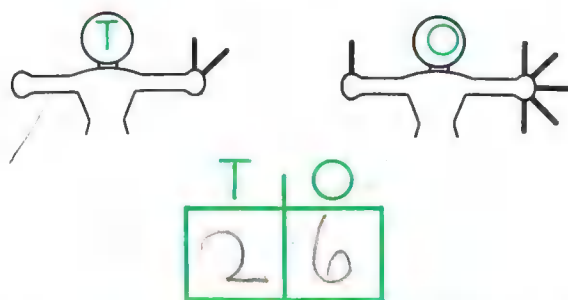
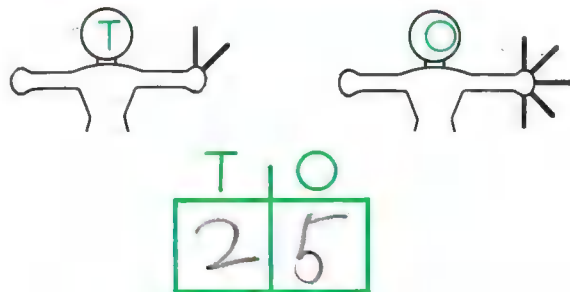
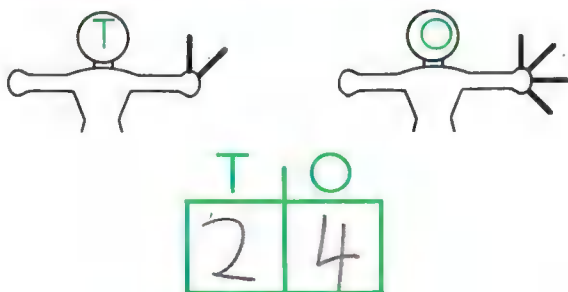
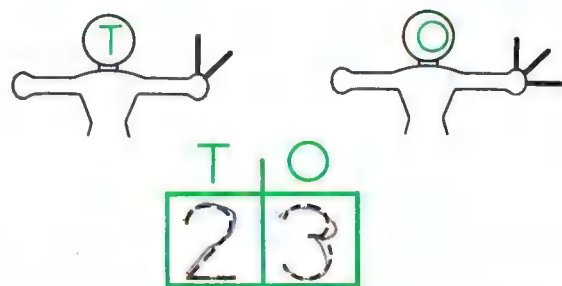
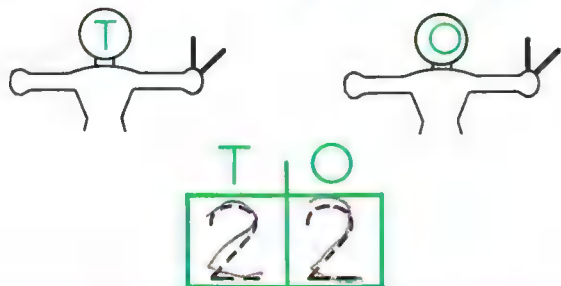
The counting man records ones

The memory man records tens

The counting man may be called the ones' man.

The memory man may be called the tens' man.

Fill the ☐'s with the correct numerals.



Place Value

a

Draw a ring around each set of ten X's.

Match each set of ten X's with one finger of the T man.

Write the numeral.

10

20

30

10

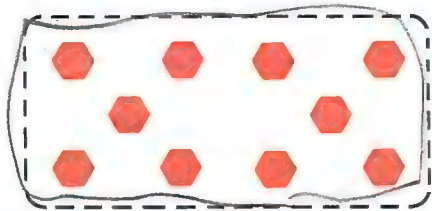
40

50

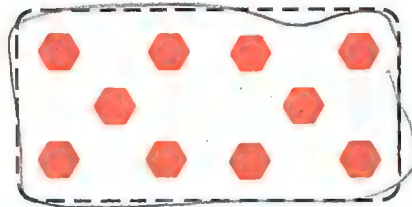
Base-Ten Numerals to 99

Ring each set of ten. Write the numeral.

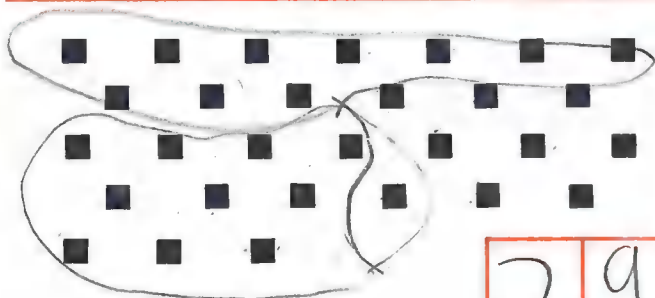
2



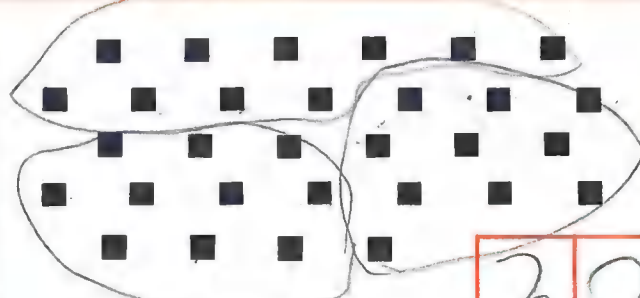
19



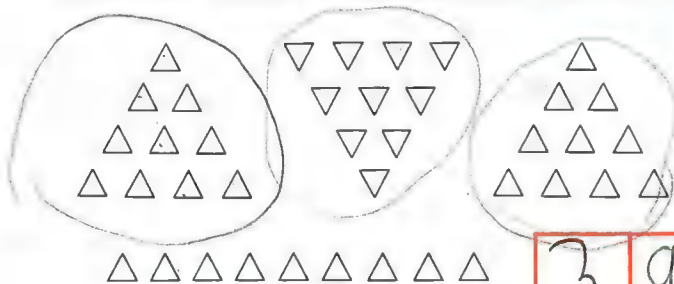
20



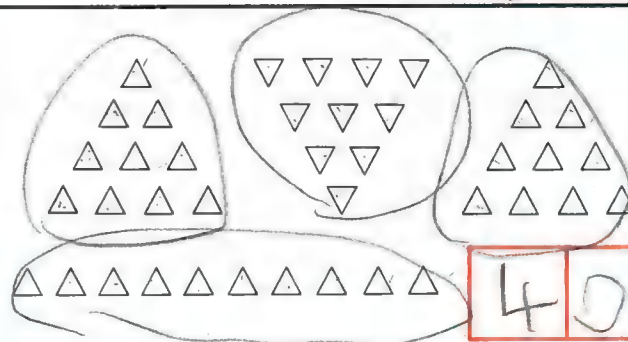
29



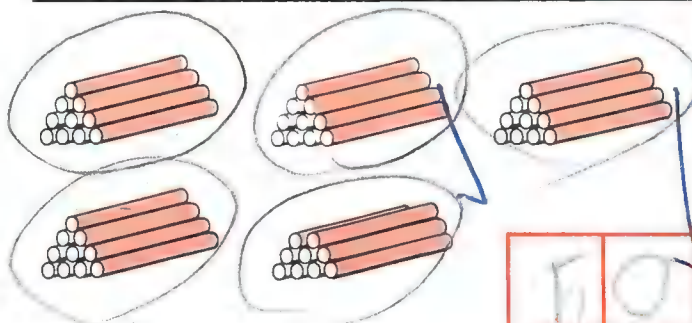
30



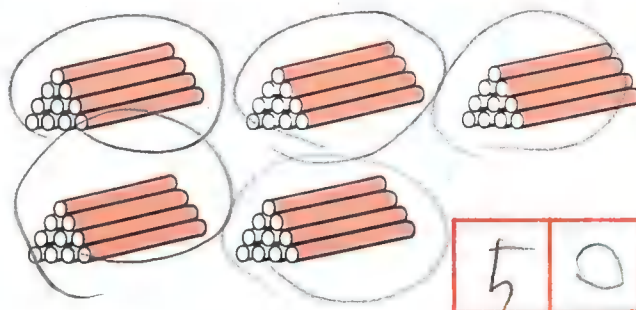
39



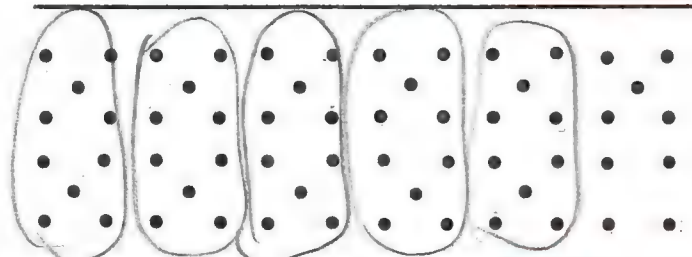
40



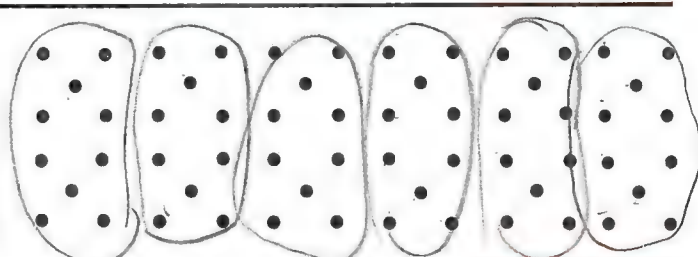
50



50



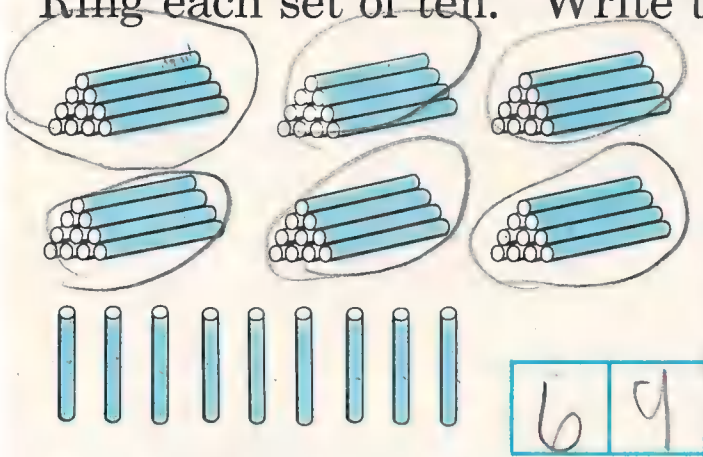
59



60

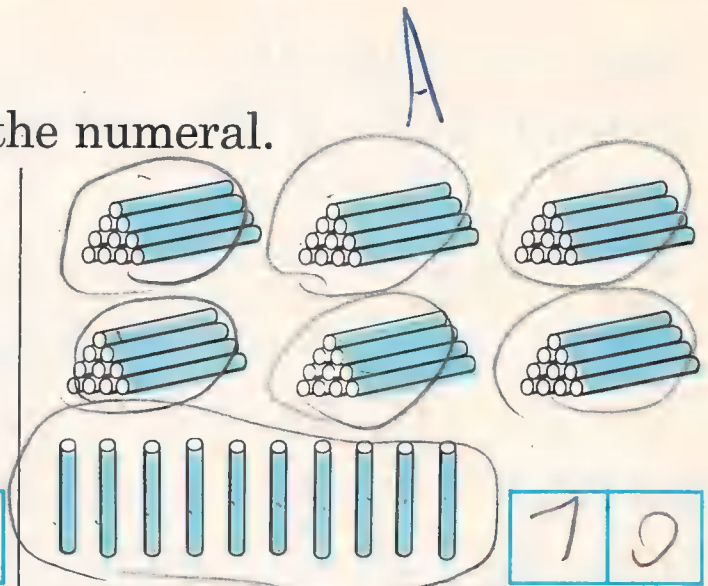
Base-Ten Numerals to 99

Ring each set of ten. Write the numeral.

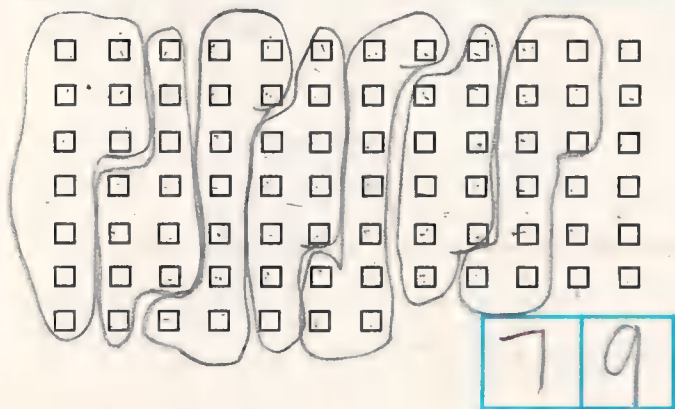


69

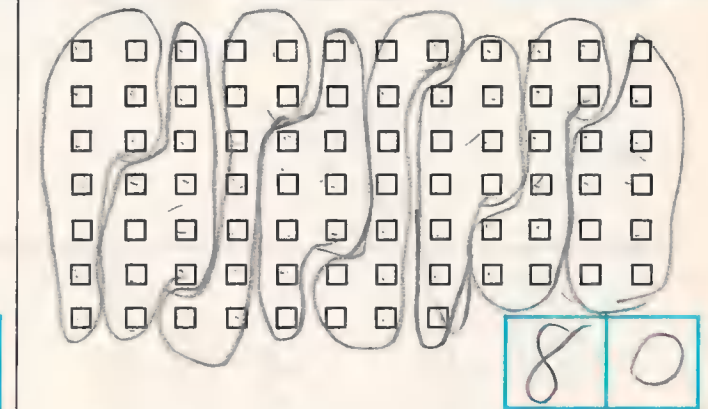
A



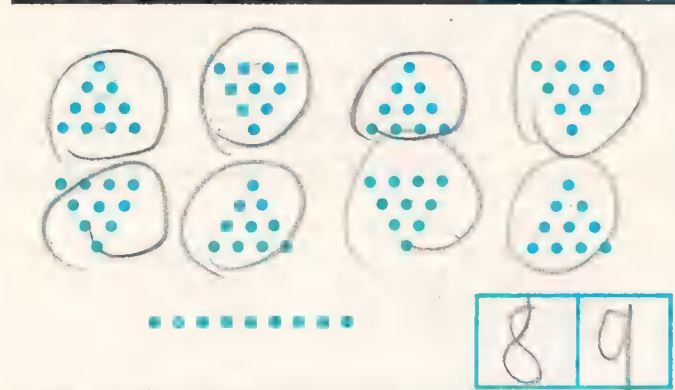
70



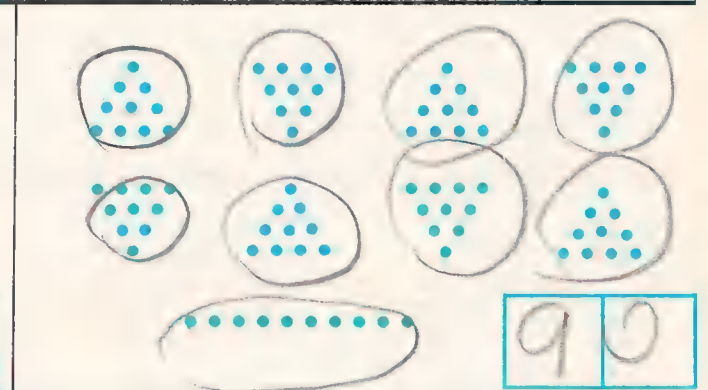
79



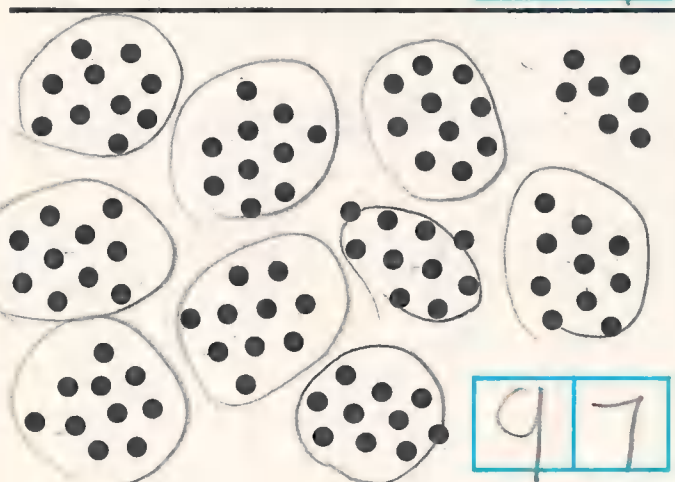
80



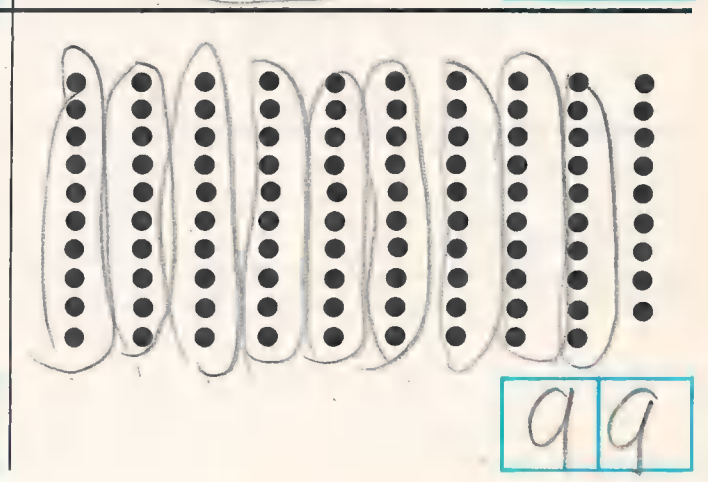
89



90



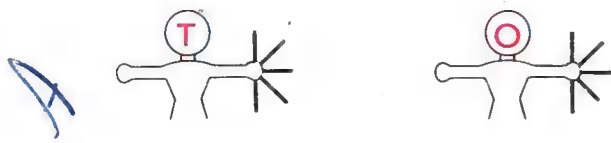
97



99

Base-Ten Numerals

Write the numeral for each number recorded by the men.



55



56



69



70



79



80



89



90



91



99

Base-Ten Numerals



Draw the correct number of fingers on each set of men.



1 9



2 0



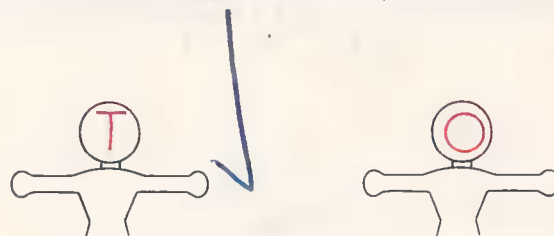
2 9



3 0



5 9



6 0



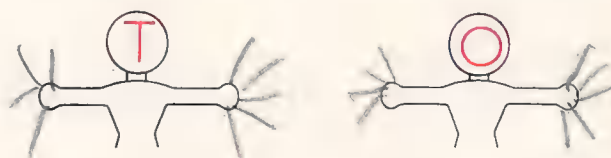
8 9



9 0



9 8

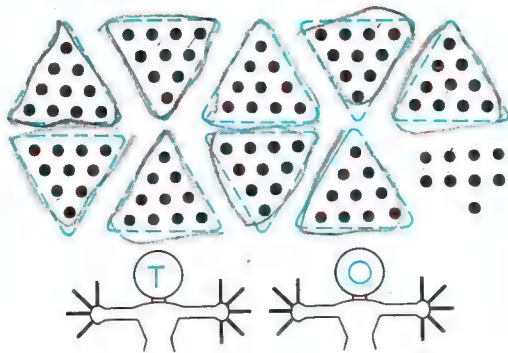


9 9

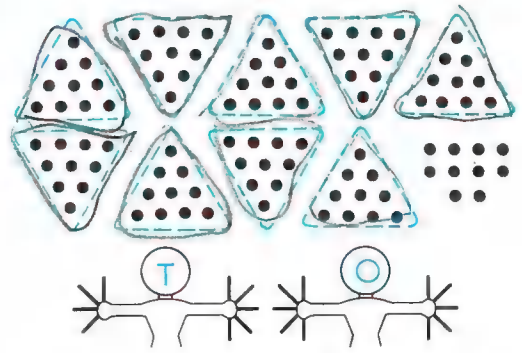
(twenty-five) 25

The Ten Tens' (or Hundreds') Place

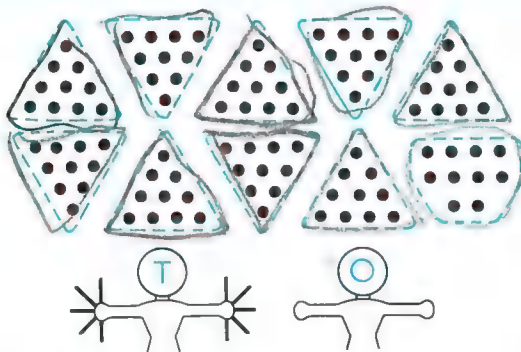
A



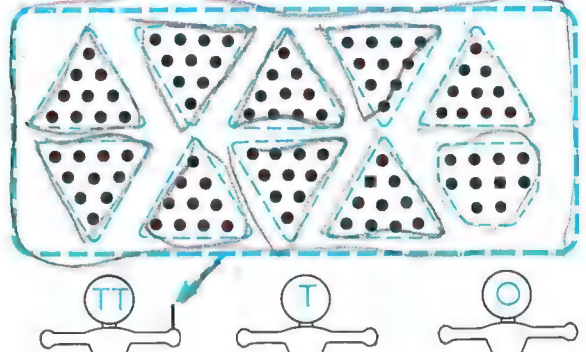
The T man and O man show
9 Tens and 9 Ones.



The T man and O man show
9 Tens and ten Ones.

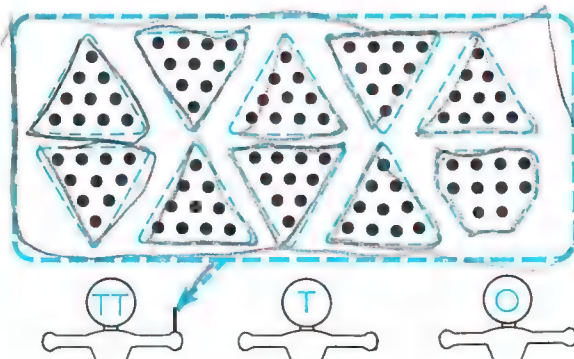


The T man and O man show
ten Tens and 0 Ones.



Another man records the
ten tens

The T man and the O man are both ready to count more.



The TT man, the T man, and the O man show

1 Ten Tens and 0 Tens and 0 Ones or

TT	T	O
<u>1</u>	<u>0</u>	<u>0</u>

26 (twenty-six)

The Ten Tens' (or Hundreds') Place

A

Draw the correct number of fingers on each set of men.



O
9



T | O
1 | 0



T | O
9 | 9



TT | T | O
1 | 0 | 0



O
9



T | O
1 | 0



T | O
1 | 1



T | O
9 | 9



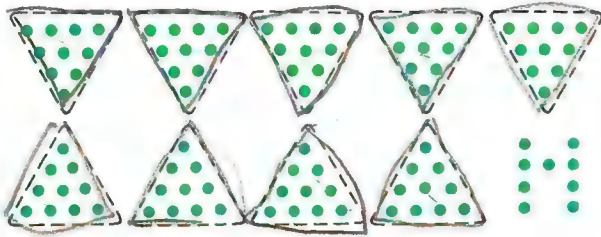
TT | T | O
1 | 0 | 0



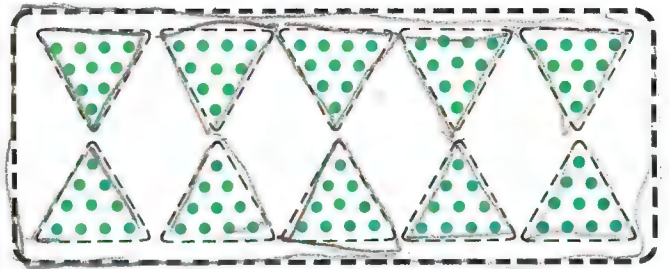
TT | T | O
1 | 0 | 1

Three-Digit Numerals

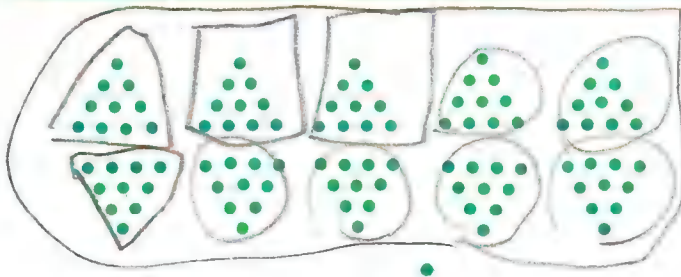
Ring each set of ten. Then ring each set of ten tens.
 Draw the correct number of fingers on each set of men.
 Write the numeral.



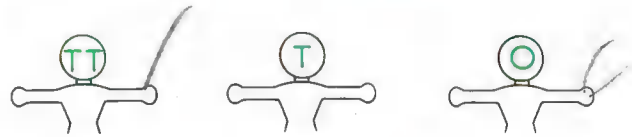
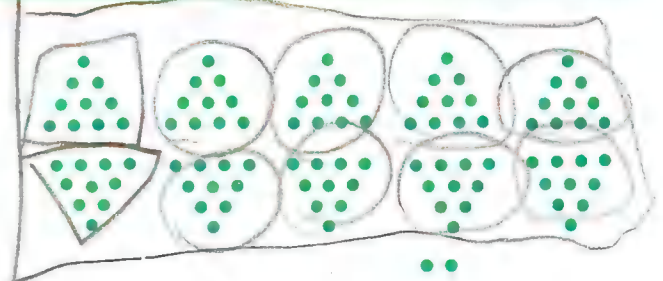
1 9 9



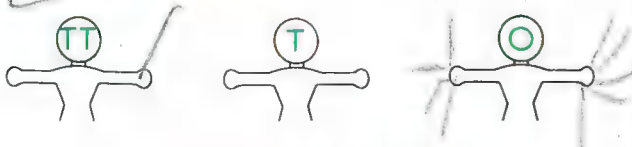
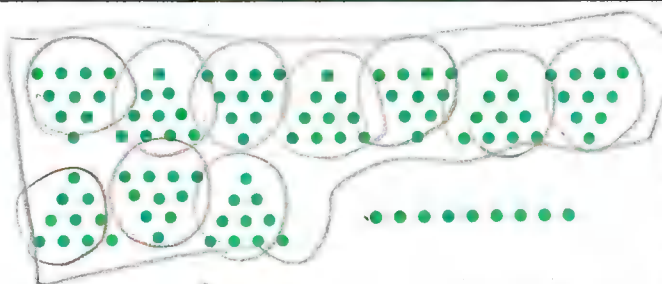
1 0 0



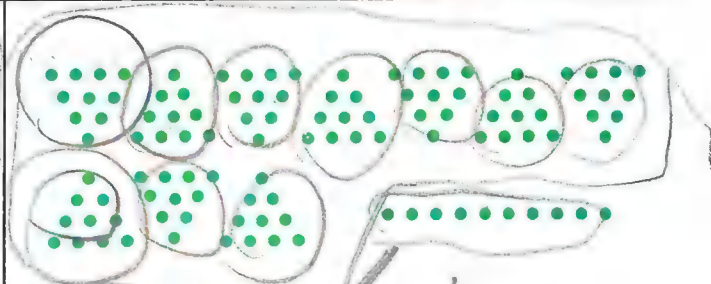
1 0 1



1 0 2



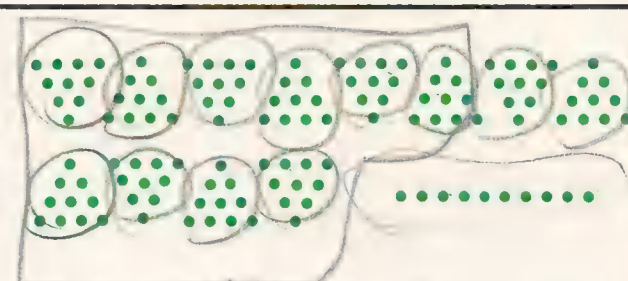
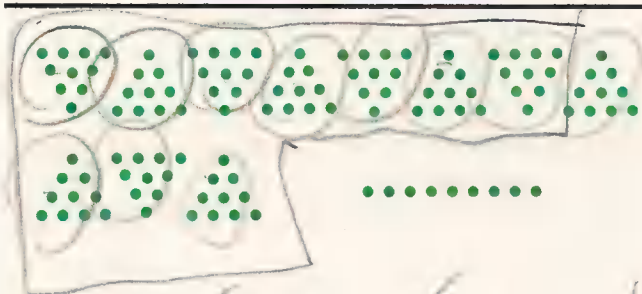
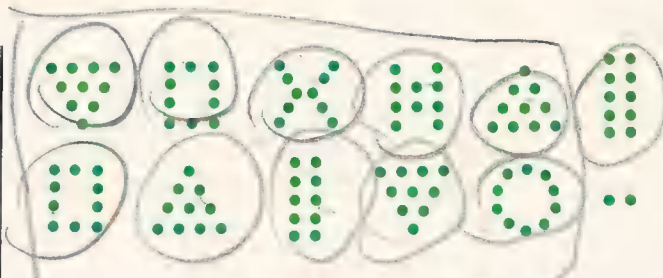
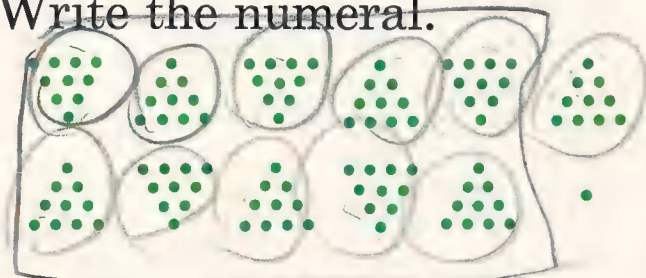
1 0 9



1 1 0

Three-Digit Numerals

Ring each set of ten. Then ring each set of ten tens.
Draw the correct number of fingers on each set of men.
Write the numeral.



Ten Tens or Hundreds

a

Ring each set of ten. Then ring each set of ten tens.
Call each ten ten a hundred. Write the numeral.

A set of base ten blocks consisting of 2 tens rods (each with 10 unit cubes) and 20 unit cubes. The tens rods are arranged in two rows of five, and the unit cubes are arranged in two rows of ten. The entire set is enclosed in a dashed rectangular box.

H	T	O
2	0	0

A set of base ten blocks consisting of 3 tens rods (each with 10 unit cubes) and 30 unit cubes. The tens rods are arranged in three rows of five, and the unit cubes are arranged in three rows of ten. The entire set is enclosed in a dashed rectangular box.

H	T	O
3	0	0

A set of base ten blocks consisting of 1 ten rod (with 10 unit cubes) and 10 unit cubes. The ten rod is arranged in one row of five, and the unit cubes are arranged in one row of ten. The entire set is enclosed in a dashed rectangular box.

H	T	O
1	0	0

A set of base ten blocks consisting of 4 tens rods (each with 10 unit cubes) and 40 unit cubes. The tens rods are arranged in four rows of five, and the unit cubes are arranged in four rows of ten. The entire set is enclosed in a dashed rectangular box.

H	T	O
4	0	0

30 (thirty)

Hundreds

Write the numeral for each number recorded by the men.



H	T	O
1	0	0



H	T	O
6	0	0



H	T	O
2	0	0



H	T	O
3	0	0



H	T	O
4	0	0



H	T	O
5	0	0



H	T	O
6	0	0



H	T	O
7	0	0



H	T	O
8	0	0

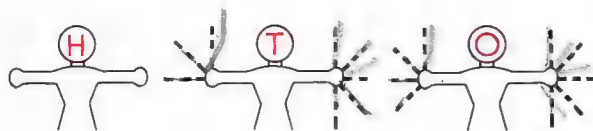


H	T	O
9	0	0

Base-Ten Numerals to 999

a

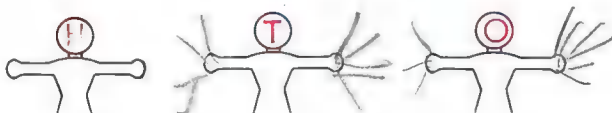
Draw the correct number of fingers on each set of men.



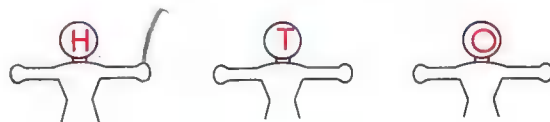
89



90



99



100



109



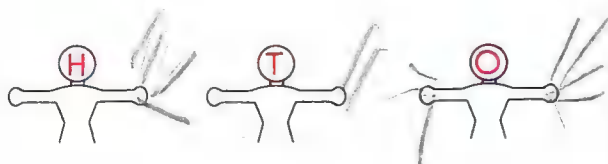
110



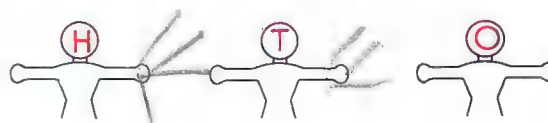
219



220



429

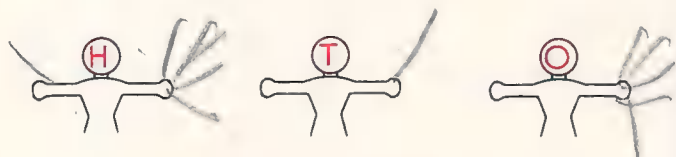


430

Base-Ten Numerals to 999

Draw the correct number of fingers on each set of men.

14



6 1 5



6 3 5



7 9 9



8 0 0



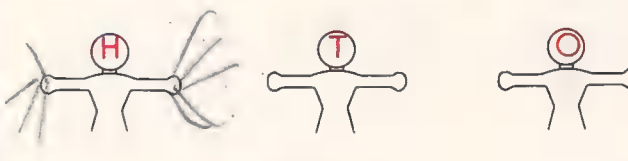
8 0 1



8 1 0



8 9 9



9 0 0



9 7 3



9 9 9

(thirty-three) 33

Renaming Numbers

Write the correct numeral above each _____.

27 means 2 tens plus 7 ones.

$$27 = \underline{2} \text{ T} + \underline{7}$$

$$27 = \underline{20} + \underline{7}$$

19 means 1 ten plus 9 ones.

$$19 = \underline{1} \text{ T} + \underline{9}$$

$$19 = \underline{10} + \underline{9}$$

91 means 9 tens plus 1 one.

$$91 = \underline{9} \text{ T} + \underline{1}$$

$$91 = \underline{90} + \underline{1}$$

252 means 2 hundreds plus 5 tens plus 2 ones.

$$252 = \underline{2} \text{ H} + \underline{5} \text{ T} + \underline{2}$$

$$252 = \underline{200} + \underline{50} + \underline{2}$$

34 (thirty-four)

Renaming Numbers

a

Write the correct numeral above each _____

$$63 = \underline{60} + \underline{3}$$

$$47 = \underline{40} + \underline{7}$$

$$15 = \underline{10} + \underline{5}$$

$$89 = \underline{80} + \underline{9}$$

$$22 = \underline{20} + \underline{2}$$

$$11 = \underline{10} + \underline{1}$$

$$98 = \underline{90} + \underline{8}$$

$$36 = \underline{30} + \underline{6}$$

$$74 = \underline{70} + \underline{4}$$

$$51 = \underline{50} + \underline{1}$$

$$88 = \underline{80} + \underline{8}$$

$$33 = \underline{30} + \underline{3}$$

$$97 = \underline{90} + \underline{7}$$

$$99 = \underline{90} + \underline{9}$$

$$121 = \underline{100} + \underline{20} + \underline{1}$$

$$112 = \underline{100} + \underline{10} + \underline{2}$$

$$211 = \underline{200} + \underline{10} + \underline{1}$$

$$499 = \underline{400} + \underline{90} + \underline{9}$$

$$949 = \underline{900} + \underline{40} + \underline{9}$$

$$994 = \underline{900} + \underline{90} + \underline{4}$$

$$333 = \underline{300} + \underline{30} + \underline{3}$$

Number Words and Numerals

a

Write the numeral for each number word.

fourteen	14	seventy-five	75
eleven	11	nineteen	19
twenty	20	twenty-one	21
thirty	30	thirty-two	32
forty	40	forty-three	43
fifty	50	fifty-four	54
sixty-five	65	seventy-six	76
eighty-eight	88	ninety-two	92
two hundred forty-seven			247
one hundred			100
one hundred two			102
three hundred fifteen			315
nine hundred ninety-nine			999

36 (thirty-six)

Number Words and Numerals

Write the number word for each numeral.

A

12

twelve

18

eighty-eight

29

twenty-nine

38

thirty-eight

47

forty-seven

56

fifty-six

65

sixty-five

74

seventy-four

83

eighty-three

92

ninety-two

961

nine hundred sixty-one

The Simplest Numeral

Write the simplest numeral for each number named.

$100 + 40 + 7 = 147$

$800 + 10 + 3 = 813$

$100 + 70 + 4 = 174$

$300 + 10 + 8 = 318$

$200 + 30 + 2 = 232$

$300 + 20 + 3 = 323$

$200 + 20 + 2 = 222$

$400 + 40 + 4 = 444$

$500 + 60 + 7 = 567$

$600 + 70 + 5 = 675$

$700 + 50 + 6 = 756$

$500 + 70 + 6 = 576$

$800 + 20 + 9 = 829$

$800 + 90 + 2 = 892$

$900 + 10 + 2 = 912$

$900 + 10 + 1 = 911$

$900 + 90 + 9 = 999$

$900 + 70 + 0 = 970$

$900 + 70 = 970$

$900 + 0 + 1 = 901$

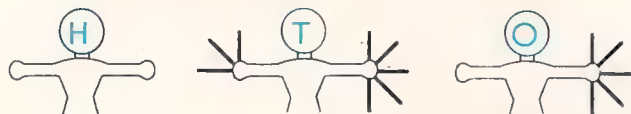
$900 + 1 = 901$

$900 + 90 + 9 = 999$

38 (thirty-eight)

Checkup Time

Write the numeral for each number recorded by the men.

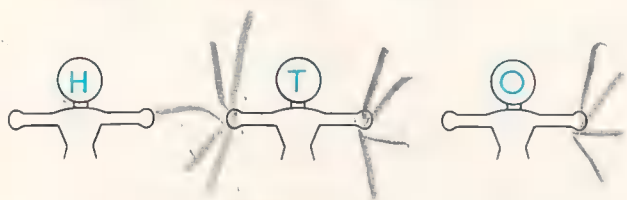


85



679

Draw the correct number of fingers on each set of men.



94



806

Write the correct numeral above each _____

17 means 1 ten plus 7 ones.

83 = 8 T + 3

343 = 3 H + 4 T + 3

972 = 900 + 70 + 2

Write the number word or the numeral for each number.

79

seventy-nine

764

seven hundred sixty-four

123

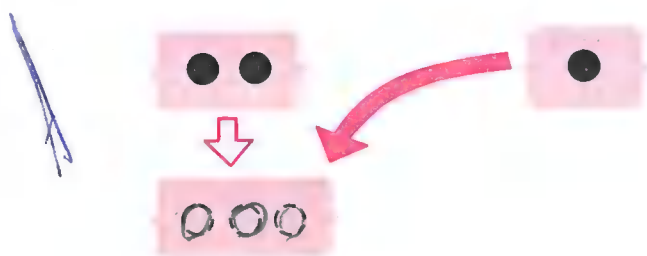
One-hundred twenty-three

(thirty-nine) 39

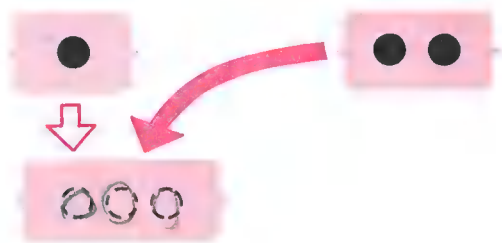
Joining Sets and Adding Numbers

Draw each set which is formed by joining two sets.

Write the addition sentence about the numbers of the sets.



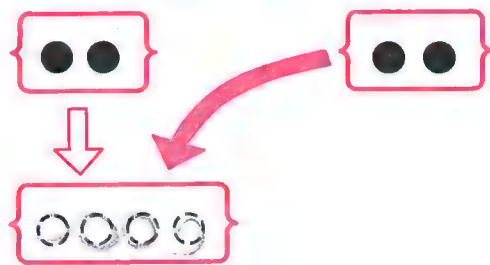
$$2 + 1 = 3$$



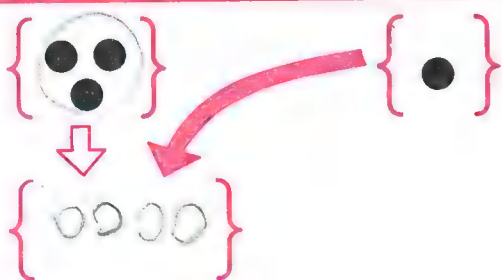
$$1 + 2 = 3$$



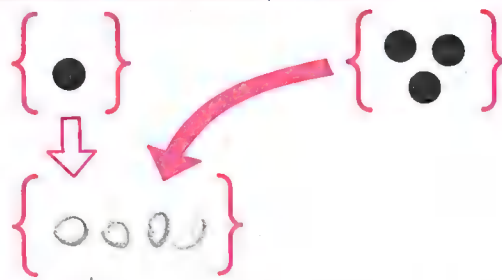
$$1 + 1 = 2$$



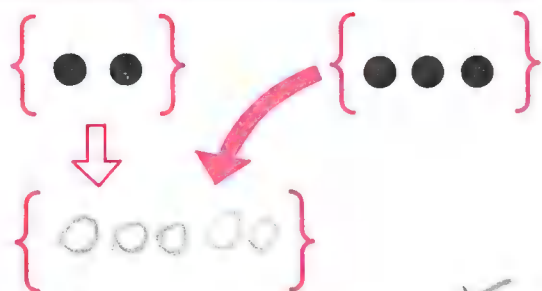
$$2 + 2 = 4$$



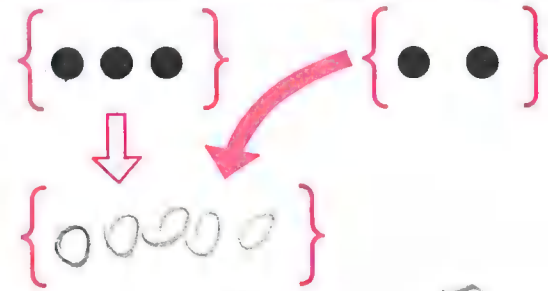
$$3 + 1 = 4$$



$$1 + 3 = 4$$



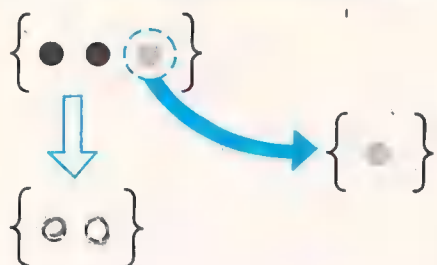
$$2 + 3 = 5$$



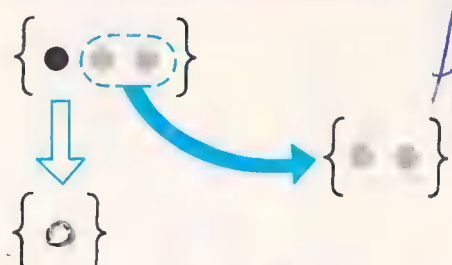
$$3 + 2 = 5$$

Separating Sets and Subtracting Numbers

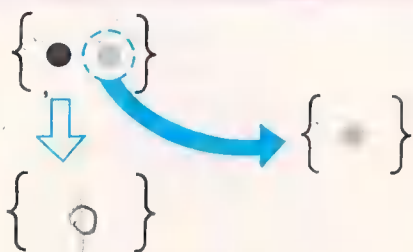
Draw each set which is formed by taking one set from another.
Write the subtraction sentence about the numbers of the sets.



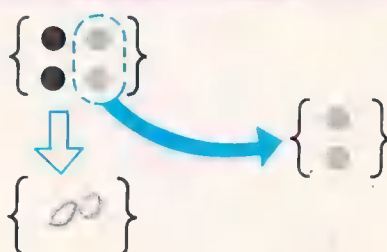
$$\underline{3} - \underline{1} = \underline{2}$$



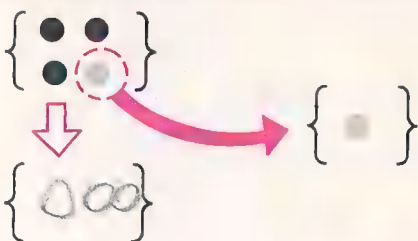
$$\underline{3} - \underline{2} = \underline{1}$$



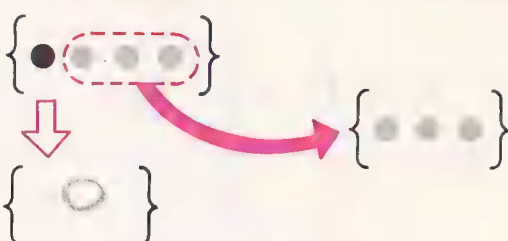
$$\underline{2} - \underline{1} = \underline{1}$$



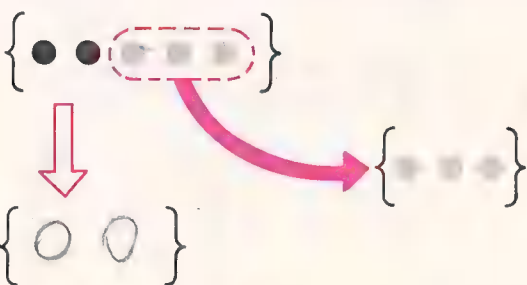
$$\underline{4} - \underline{2} = \underline{2}$$



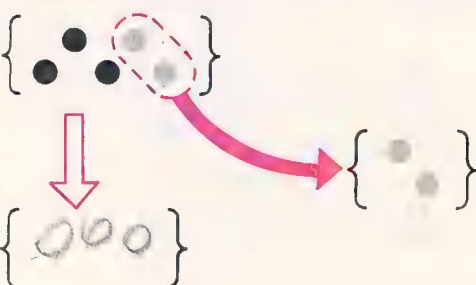
$$\underline{4} - \underline{1} = \underline{3}$$



$$\underline{4} - \underline{3} = \underline{1}$$



$$\underline{5} - \underline{3} = \underline{2}$$



$$\underline{5} - \underline{2} = \underline{3}$$

The Empty Set and the Number Zero

Write the correct numeral in each \square .

A

$3 + 0 = \boxed{3}$

$3 - 0 = \boxed{3}$

$$2 + 0 = \boxed{2}$$

$$2 - 0 = \boxed{2}$$

$$5 + 0 = \boxed{5}$$

$$5 - 0 = \boxed{5}$$

$$1 + 0 = \boxed{1}$$

$$1 - 0 = \boxed{1}$$

$$4 + 0 = \boxed{4}$$

$$4 - 0 = \boxed{4}$$

$$0 + 0 = \boxed{0}$$

$$0 - 0 = \boxed{0}$$

$$0 + 3 = \boxed{3}$$

$$3 - 3 = \boxed{0}$$

$$0 + 2 = \boxed{2}$$

$$2 - 2 = \boxed{0}$$

$$0 + 5 = \boxed{5}$$

$$5 - 5 = \boxed{0}$$

$$0 + 1 = \boxed{1}$$

$$1 - 1 = \boxed{0}$$

$$0 + 4 = \boxed{4}$$

$$4 - 4 = \boxed{0}$$

a

Addition and Subtraction Combinations of Five

Write the correct numeral in each .

Do

$0 + 5 = \boxed{5}$

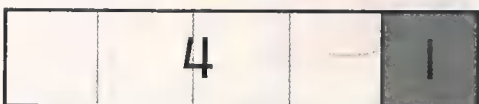
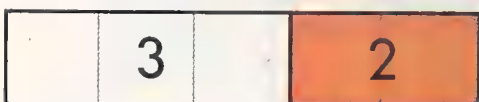
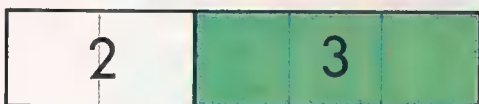
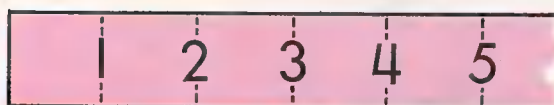
$1 + 4 = \boxed{5}$

$2 + 3 = \boxed{5}$

$3 + 2 = \boxed{5}$

$4 + 1 = \boxed{5}$

$5 + 0 = \boxed{5}$



Undo

$5 - 5 = \boxed{0}$

$5 - 4 = \boxed{1}$

$5 - 3 = \boxed{2}$

$5 - 2 = \boxed{3}$

$5 - 1 = \boxed{4}$

$5 - 0 = \boxed{5}$

Write the correct numeral in each .

$3 + 2 = \boxed{5}$

$3 + \boxed{2} = 5$

$\boxed{3} + 2 = 5$

$\boxed{2} + 3 = 5$

$2 + \boxed{3} = 5$

$2 + 3 = \boxed{5}$

$\boxed{1} + 4 = 5$

$4 + \boxed{1} = 5$

$\boxed{4} + 1 = 5$

$0 + \boxed{5} = 5$

$\boxed{5} + 0 = 5$

$5 + \boxed{0} = 5$

$5 - \boxed{2} = 3$

$5 - \boxed{3} = 2$

$5 - \boxed{5} = 0$

$5 - \boxed{0} = 5$

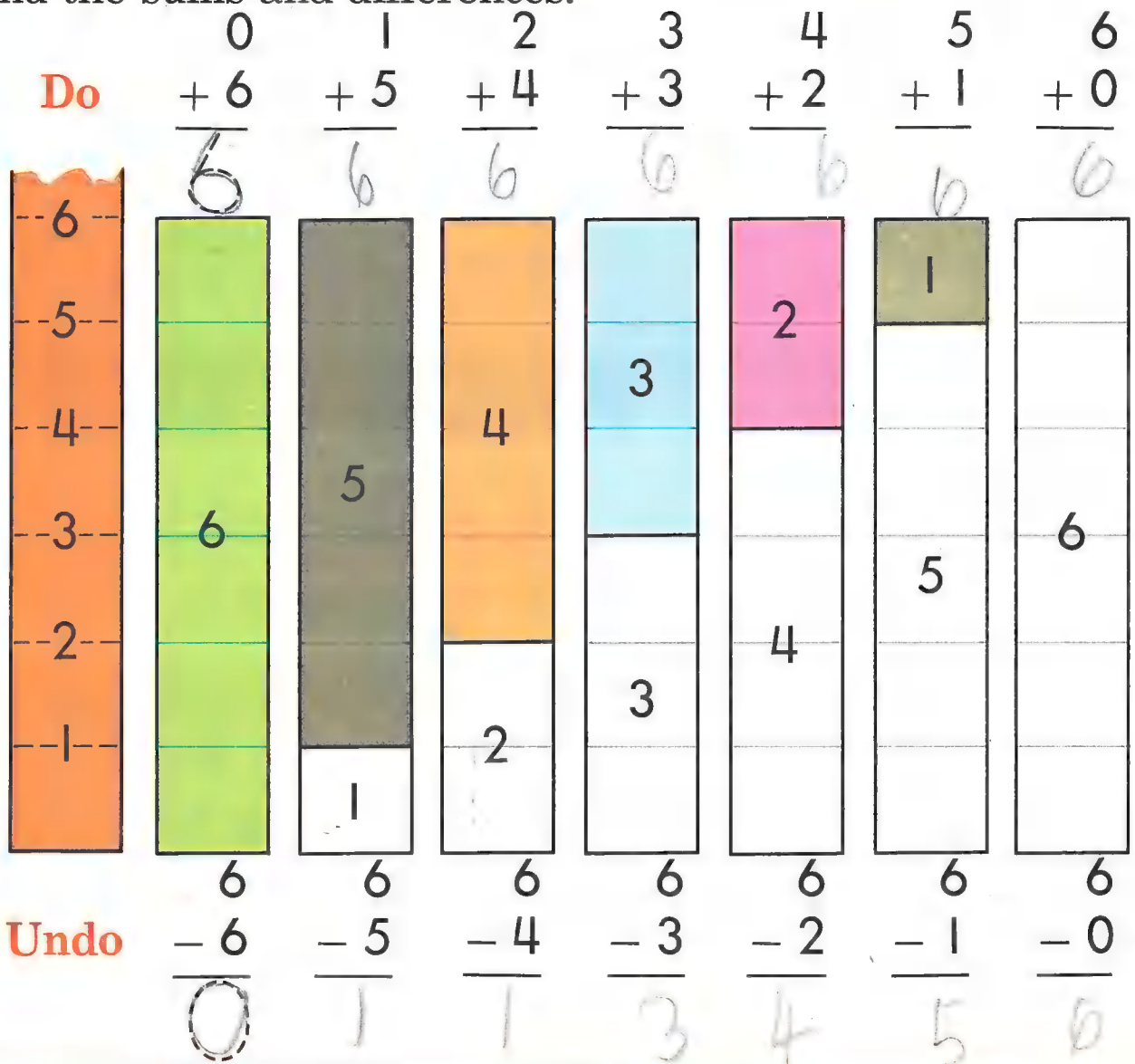
$5 - \boxed{4} = 1$

$5 - \boxed{1} = 4$

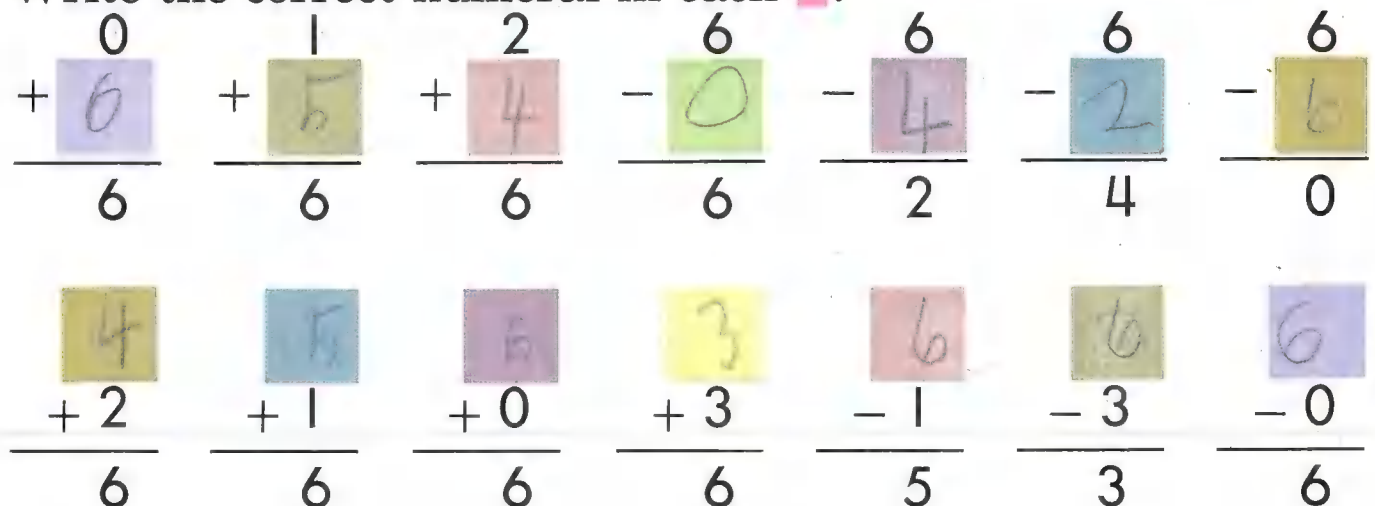
a

Addition and Subtraction Combinations of Six

Find the sums and differences.



Write the correct numeral in each .



Addition and Subtraction Combinations of Seven

Write the correct numeral in each .

$0 + 7 = \boxed{7}$



$7 - 7 = \boxed{0}$

$1 + 6 = \boxed{7}$



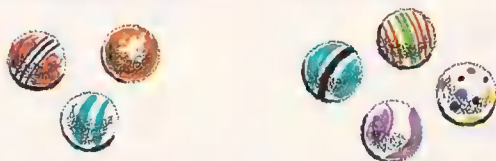
$7 - 6 = \boxed{1}$

$2 + 5 = \boxed{7}$



$7 - 5 = \boxed{2}$

$3 + 4 = \boxed{7}$



$7 - 4 = \boxed{3}$

$4 + \boxed{3} = 7$



$7 - \boxed{3} = 4$

$\boxed{5} + 2 = 7$



$\boxed{7} - 2 = 5$

$6 + \boxed{1} = 7$



$7 - \boxed{1} = 6$

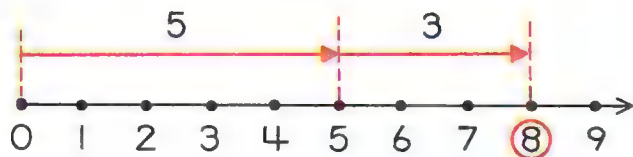
$\boxed{7} + 0 = 7$



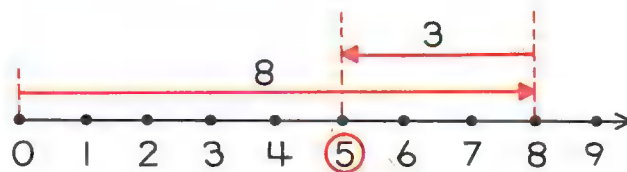
$\boxed{7} - 0 = 7$

Addition and Subtraction Combinations of Eight

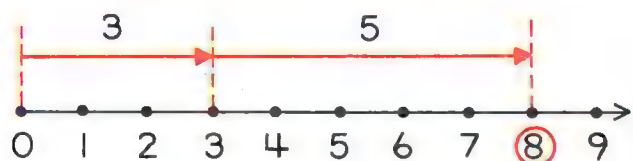
Study each number line. Then solve each open sentence.



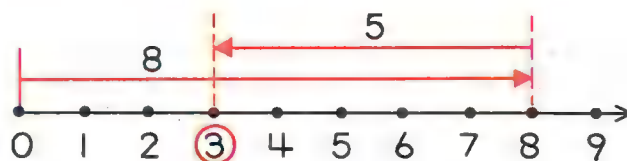
$$5 + 3 = \boxed{8}$$



$$8 - 3 = \boxed{5}$$



$$3 + 5 = \boxed{8}$$



$$8 - 5 = \boxed{3}$$

Think of moves on the number line to solve each open sentence.



$$0 + 8 = \boxed{8}$$

$$8 + 0 = \boxed{8}$$

$$7 + 1 = \boxed{8}$$

$$\boxed{1} + 7 = 8$$

$$5 + \boxed{3} = 8$$

$$\boxed{8} - 3 = 5$$

$$6 + 2 = \boxed{8}$$

$$2 + 6 = \boxed{8}$$

$$4 + 4 = \boxed{8}$$

$$4 + \boxed{4} = 8$$

$$8 - \boxed{4} = 4$$

$$\boxed{6} - 7 = 1$$

$$8 - 6 = \boxed{2}$$

$$8 - 2 = \boxed{6}$$

$$8 - 1 = \boxed{7}$$

$$8 - \boxed{1} = 7$$

$$8 - 0 = \boxed{8}$$

$$8 - \boxed{8} = 0$$

Addition and Subtraction Combinations of Nine

Think of moves on the number line to solve each open sentence.



$4 + 5 = \boxed{9}$

$5 + 4 = \boxed{9}$

$9 - 3 = \boxed{6}$

$3 + 6 = \boxed{9}$

$7 + 2 = \boxed{9}$

$9 - 6 = \boxed{3}$

$6 + \boxed{3} = 9$

$\boxed{2} + 7 = 9$

$9 - \boxed{8} = 1$

$\boxed{9} - 1 = 8$

$9 - \boxed{2} = 7$

$\boxed{0} + 9 = 9$

$1 + \boxed{8} = 9$

$\boxed{9} - 0 = 9$

$8 + \boxed{1} = 9$

$\boxed{9} + 0 = 9$

$9 - 9 = \boxed{0}$

$9 - \boxed{4} = 5$

$9 - \boxed{3} = 6$

$\boxed{9} - 8 = 1$

$9 - \boxed{5} = 4$

Write the correct symbol (+ or -) in each .

$4 \text{ } \boxed{+} \text{ } 5 = 9$

$9 \text{ } \boxed{-} \text{ } 5 = 4$

$3 \text{ } \boxed{+} \text{ } 6 = 9$

$6 \text{ } \boxed{+} \text{ } 3 = 9$

$9 \text{ } \boxed{-} \text{ } 3 = 6$

$9 \text{ } \boxed{-} \text{ } 1 = 8$

$9 \text{ } \boxed{-} \text{ } 9 = 0$

$0 \text{ } \boxed{+} \text{ } 9 = 9$

$8 \text{ } \boxed{+} \text{ } 1 = 9$

Addition and Subtraction Combinations of Ten

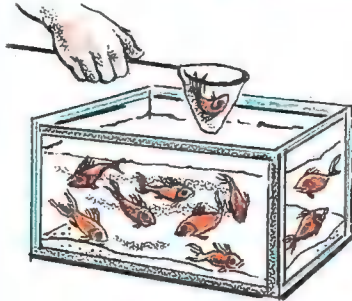
Solve each open sentence.

$7 + 3 = 10$



$10 - 3 = 7$

$9 + 1 = 10$



$10 - 1 = 9$

$8 + 2 = 10$



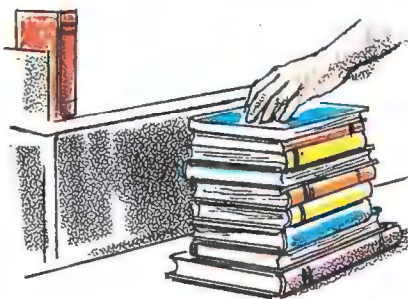
$10 - 2 = 8$

$3 + 7 = 10$



$10 - 7 = 3$

$1 + 9 = 10$



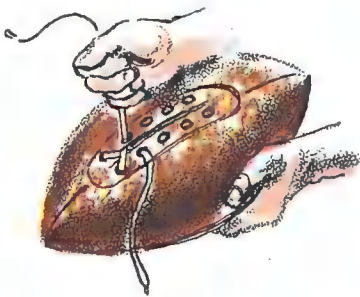
$10 - 9 = 1$

$2 + 8 = 10$



$10 - 8 = 2$

$4 + 6 = 10$



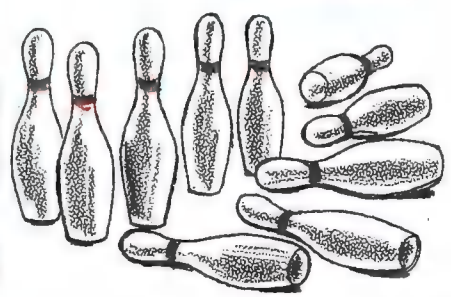
$10 - 6 = 4$

$6 + 4 = 10$



$10 - 4 = 6$

$5 + 5 = 10$



$10 - 5 = 5$

Addition and Subtraction Combinations of Ten

14

Fill in the blanks so each addition sentence is different.

$10 = 9 + 1$

$10 = 6 + 4$

$10 = 3 + 7$

$10 = 8 + 2$

$10 = 5 + 5$

$10 = 2 + 8$

$10 = 7 + 3$

$10 = 4 + 6$

$10 = 1 + 9$

Solve each open sentence.

$7 + 3 = 10$

$9 + 1 = 10$

$10 - 9 = 1$

$7 + 3 = 10$

$4 + 6 = 10$

$10 - 4 = 6$

$3 + 7 = 10$

$2 + 8 = 10$

$10 - 8 = 2$

$3 + 6 = 10$

$10 - 1 = 9$

$10 - 2 = 8$

$5 + 5 = 10$

$10 - 5 = 5$

$10 - 6 = 4$

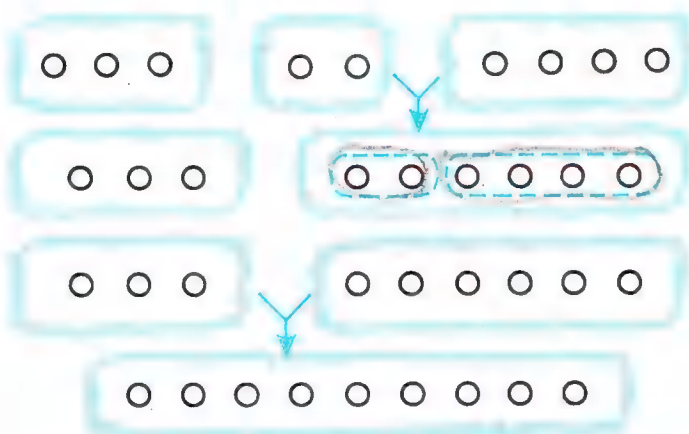
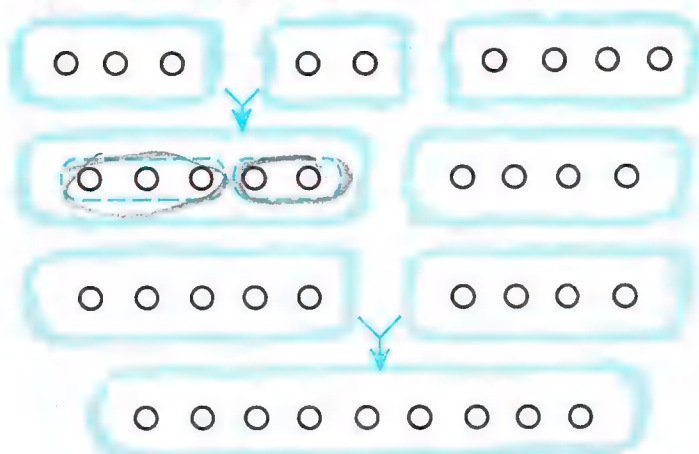
$8 + 2 = 10$

$10 - 7 = 3$

$10 - 3 = 7$

Adding Three Numbers

Write the correct numeral in each blank.



$$\begin{array}{r} (1 + 5) + 2 \\ \underline{6} + \underline{2} \\ 8 \end{array}$$

$$\begin{array}{r} 1 + (5 + 2) \\ \underline{1} + \underline{7} \\ 8 \end{array}$$

$$\begin{array}{r} (5 + 2) + 1 \\ \underline{7} + \underline{1} \\ 8 \end{array}$$

$$\begin{array}{r} 5 + (2 + 1) \\ \underline{5} + \underline{3} \\ 8 \end{array}$$

Of three numbers being added, any two can be grouped.

Adding Three Numbers

4

Find each sum.

$$(6 + 3) + 1 = 10$$

$$6 + (3 + 1) = 10$$

Think

$$\begin{array}{r} 3 \\ 2 \\ + 4 \\ \hline 9 \end{array}$$

Write

Think

$$\begin{array}{r} 2 \\ 4 \\ + 3 \\ \hline 9 \end{array}$$

Write

Think

$$\begin{array}{r} 7 \\ 0 \\ + 3 \\ \hline 10 \end{array}$$

Write

$$(5 + 2) + 0 = 7$$

$$5 + (2 + 0) = 7$$

$$1 + (7 + 2) = 10$$

$$(1 + 7) + 2 = 10$$

$$(3 + 2) + 2 = 7$$

$$3 + (2 + 2) = 7$$

$$\begin{array}{r} 5 \\ 3 \\ + 1 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 1 \\ 3 \\ + 5 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \\ 1 \\ + 5 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \\ 5 \\ + 1 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 5 \\ 1 \\ + 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 1 \\ 5 \\ + 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 6 \\ 0 \\ + 4 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 4 \\ 6 \\ + 0 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 4 \\ 0 \\ + 6 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 0 \\ 4 \\ + 6 \\ \hline 9 \end{array}$$

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. There were 8 books on a shelf. Then 2 more books were placed on the shelf. How many books were on the shelf?

$$\begin{array}{r} 8 + 2 = \square \\ 10 \text{ books} \end{array}$$

Work space

2. Tim owns 6 chicks. He wants to have 10 chicks to raise. How many more chicks does Tim need?

3. Mary had 10 doll dresses. She gave 3 doll dresses to Sue. How many doll dresses did Mary have left?

4. Ken is 9 years old. In how many years will Ken be 10 years old?

Ten Plus a Number of Ones

Write the correct numeral in each blank.



$$\underline{1} \text{ T} + \underline{1} = \underline{10} + \underline{1} = \underline{11}$$



$$\underline{1} \text{ T} + \underline{2} = \underline{10} + \underline{2} = \underline{12}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



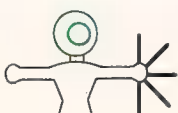
$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ T} + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

Using 10 to Make Addition Easy

Write the correct numeral in each blank.



$9 + 2$



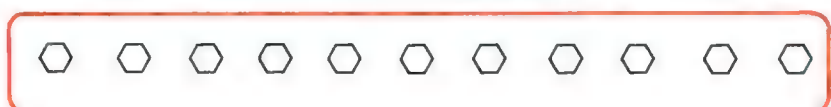
$9 + (1 + \underline{\quad})$



$(9 + 1) + \underline{\quad}$



$\underline{10} + \underline{\quad}$



$\underline{\quad} + \underline{\quad}$

Write the correct numeral in each blank.



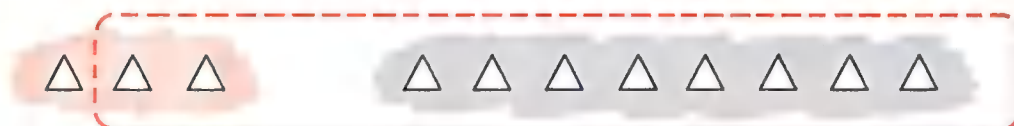
$9 + 4 = 9 + (1 + 3) = (9 + 1) + 3 = 10 + 3 = \underline{13}$



$3 + 8 = 3 + (7 + 1) = (3 + 7) + 1 = 10 + 1 = \underline{\quad}$



$9 + 4 = (3 + 6) + 4 = 3 + (6 + 4) = 3 + 10 = \underline{\quad}$



$3 + 8 = (1 + 2) + 8 = 1 + (2 + 8) = 1 + 10 = \underline{\quad}$

54 (fifty-four)

Using 10 to Make Addition Easy

In $8 + 5 = \square$, to make 10 add 2 to 8. Name 5 as $2 + 3$.

$$8 + 5 = 8 + (2 + 3) = (8 + 2) + 3 = 10 + 3 = 13$$

In $8 + 5 = \square$, to make 10 add 5 to 5. Name 8 as $3 + 5$.

$$8 + 5 = (3 + 5) + 5 = 3 + (5 + 5) = 3 + 10 = 13$$

Write the correct numeral in each blank.

$$4 + 7 = 4 + (6 + \underline{\quad}) = (4 + 6) + \underline{\quad} = 10 + \underline{\quad} = \underline{\quad}$$

$$4 + 7 = (1 + \underline{\quad}) + 7 = 1 + (\underline{\quad} + 7) = 1 + \underline{\quad} = \underline{\quad}$$

$$8 + 6 = 8 + (\underline{\quad} + 4) = (8 + \underline{\quad}) + 4 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 6 = (4 + \underline{\quad}) + 6 = 4 + (\underline{\quad} + 6) = 4 + \underline{\quad} = \underline{\quad}$$

$$6 + 6 = 6 + (4 + \underline{\quad}) = (6 + 4) + \underline{\quad} = 10 + \underline{\quad} = \underline{\quad}$$

$$4 + 9 = 4 + (\underline{\quad} + 3) = (4 + \underline{\quad}) + 3 = \underline{\quad} + 3 = \underline{\quad}$$

$$8 + 3 = 8 + (2 + \underline{\quad}) = (8 + 2) + \underline{\quad} = 10 + \underline{\quad} = \underline{\quad}$$

$$2 + 9 = (\underline{\quad} + 1) + 9 = \underline{\quad} + (1 + 9) = \underline{\quad} + 10 = \underline{\quad}$$

$$7 + 7 = 7 + (3 + \underline{\quad}) = (7 + 3) + \underline{\quad} = 10 + \underline{\quad} = \underline{\quad}$$

Using 10 to Make Addition Easy

Write the correct numeral in each blank.

$$9 + 3 = 10 + \underline{2} = \underline{12}$$

$$3 + 9 = 10 + \underline{2} = \underline{12}$$

$$9 + 5 = 10 + \underline{\quad} = \underline{\quad}$$

$$5 + 9 = 10 + \underline{\quad} = \underline{\quad}$$

$$9 + 6 = 10 + \underline{\quad} = \underline{\quad}$$

$$6 + 9 = 10 + \underline{\quad} = \underline{\quad}$$

$$9 + 7 = 10 + \underline{\quad} = \underline{\quad}$$

$$7 + 9 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 7 = 10 + \underline{\quad} = \underline{\quad}$$

$$7 + 8 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 8 = 10 + \underline{\quad} = \underline{\quad}$$

$$9 + 9 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 9 = 10 + \underline{\quad} = \underline{\quad}$$

$$9 + 8 = 10 + \underline{\quad} = \underline{\quad}$$

$$4 + 8 = 10 + \underline{\quad} = \underline{\quad}$$

$$5 + 8 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 4 = 10 + \underline{\quad} = \underline{\quad}$$

$$8 + 5 = 10 + \underline{\quad} = \underline{\quad}$$

$$7 + 5 = 10 + \underline{\quad} = \underline{\quad}$$

$$6 + 5 = 10 + \underline{\quad} = \underline{\quad}$$

$$6 + 7 = 10 + \underline{\quad} = \underline{\quad}$$

$$5 + 7 = 10 + \underline{\quad} = \underline{\quad}$$

$$5 + 6 = 10 + \underline{\quad} = \underline{\quad}$$

$$7 + 6 = 10 + \underline{\quad} = \underline{\quad}$$

Using 10 to Make Subtraction Easy

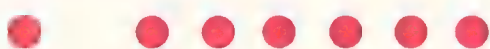
Write the correct numeral in each blank.



$$11 - 4$$



$$1 + (10 - 4)$$



$$\underline{1} + \underline{6}$$



$$\underline{7}$$



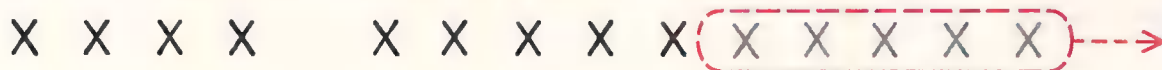
$$13 - 6 = \underline{3} + (\underline{10} - \underline{6}) = \underline{3} + \underline{4} = \underline{7}$$



$$12 - 4 = \underline{2} + (\underline{10} - \underline{4}) = \underline{2} + \underline{6} = \underline{8}$$



$$16 - 7 = \underline{\quad} + (\underline{10} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$14 - 5 = \underline{\quad} + (\underline{10} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

Using 10 to Make Subtraction Easy

Write the correct numeral in each blank.

$$13 - 4 = \underline{3} + (\underline{10} - \underline{4}) = \underline{3} + \underline{6} = \underline{9}$$

$$12 - 3 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$11 - 3 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$11 - 2 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$12 - 8 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$12 - 7 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$12 - 6 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$13 - 7 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$13 - 8 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$15 - 9 = \underline{\quad} + (\underline{\quad} - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

Using 10 to Make Subtraction Easy

Write the correct numeral in each blank.

$$15 - 7 = \text{Think } 5 + (10 - 7) = \text{Write } \underline{5} + \underline{3} = \underline{8}$$

$15 - 8 = \underline{5} + \underline{2} = \underline{7}$

$12 - 5 = \underline{2} + \underline{5} = \underline{\quad}$

$16 - 9 = \underline{6} + \underline{\quad} = \underline{\quad}$

$14 - 6 = \underline{4} + \underline{\quad} = \underline{\quad}$

$16 - 8 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$14 - 8 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$11 - 5 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$14 - 7 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$11 - 6 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$13 - 5 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$11 - 7 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$15 - 6 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$11 - 8 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$18 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$11 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$17 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$12 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$17 - 8 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$13 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$14 - 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

Finding Sums

Find each sum.

$$\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 9 \\ \hline \end{array}$$

Finding Differences

Find each difference.

$$\begin{array}{r} 11 \\ - 5 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 11 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 4 \\ \hline \end{array}$$

The Basic Addition and Subtraction Facts

Complete the addition and subtraction table below.

$0 + 0 = 0$

$0 + 1 = 1$

$0 + 2 = 2$

$1 + 0 = 1$

$1 + 1 = 2$

$1 + 2 = 3$

$2 + 0 = 2$

$2 + 1 = 3$

$2 + 2 = 4$

$\begin{smallmatrix} + \\ - \end{smallmatrix}$	0	1	2
0	0	1	2
1	1	2	3
2	2	3	4

$0 - 0 = 0$

$1 - 1 = 0$

$2 - 2 = 0$

$1 - 0 = 1$

$2 - 1 = 1$

$3 - 2 = 1$

$2 - 0 = 2$

$3 - 1 = 2$

$4 - 2 = 2$

Complete the addition and subtraction table below.

$\begin{smallmatrix} + \\ - \end{smallmatrix}$	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

Checkup Time

Solve each open sentence.

$3 + 2 = \square$

$2 + 1 = \square$

$3 - 1 = \square$

$\square + 5 = 5$

$5 - \square = 0$

$5 - \square = 2$

$6 - \square = 6$

$3 + \square = 6$

$7 - 3 = \square$

$7 + \square = 8$

$8 + \square = 8$

$9 - 9 = \square$

$7 + \square = 10$

$10 - 8 = \square$

$\square + 4 = 10$

Write the correct numeral in each blank.

$9 + 4 = 9 + (\underline{\quad} + 3) = (9 + \underline{\quad}) + 3 = 10 + \underline{\quad} = \underline{\quad}$

$6 + 8 = 6 + (4 + \underline{\quad}) = (6 + 4) + \underline{\quad} = 10 + \underline{\quad} = \underline{\quad}$

Write the correct numeral in each blank.

$11 - 4 = \underline{\quad} + (10 - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$

$14 - 5 = \underline{\quad} + (10 - \underline{\quad}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$

Find each sum or difference.

$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$$

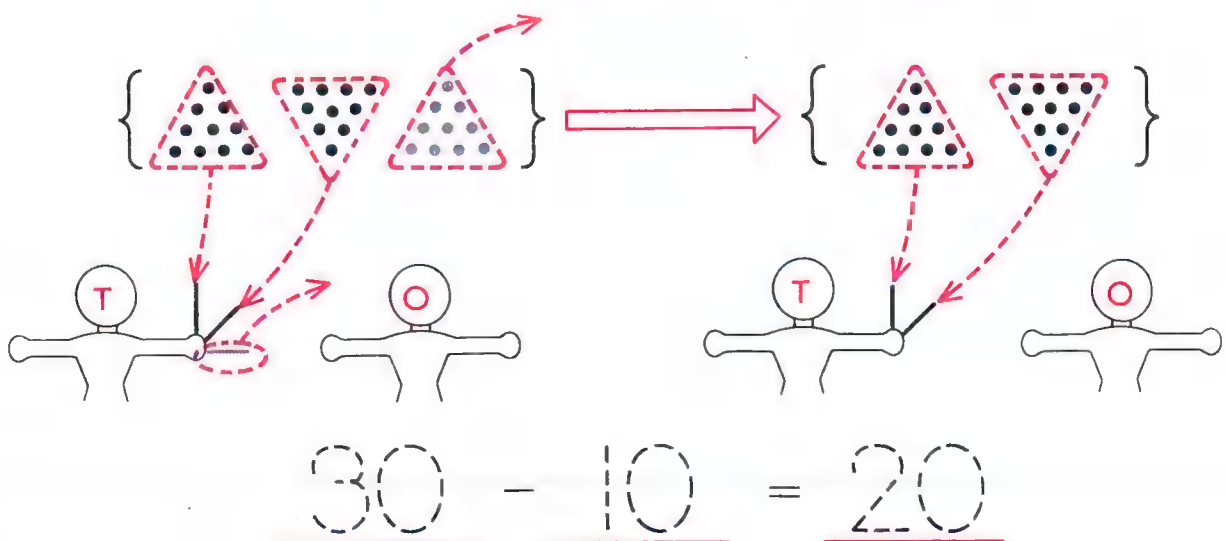
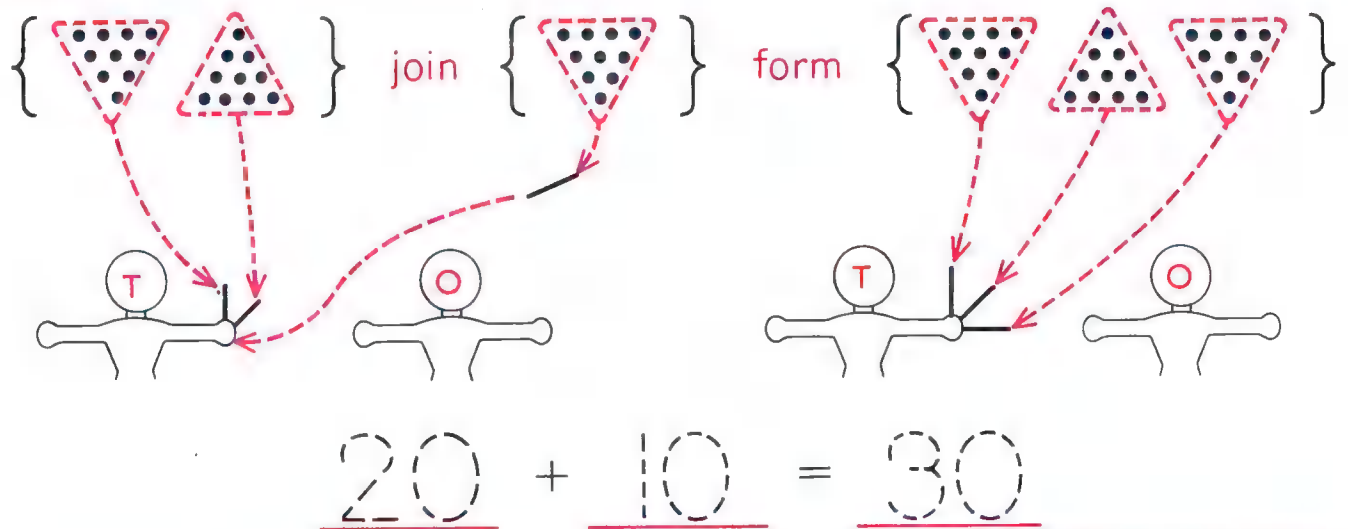
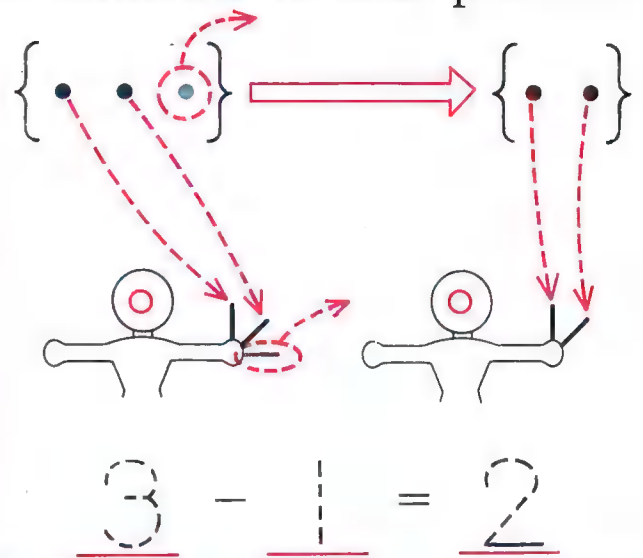
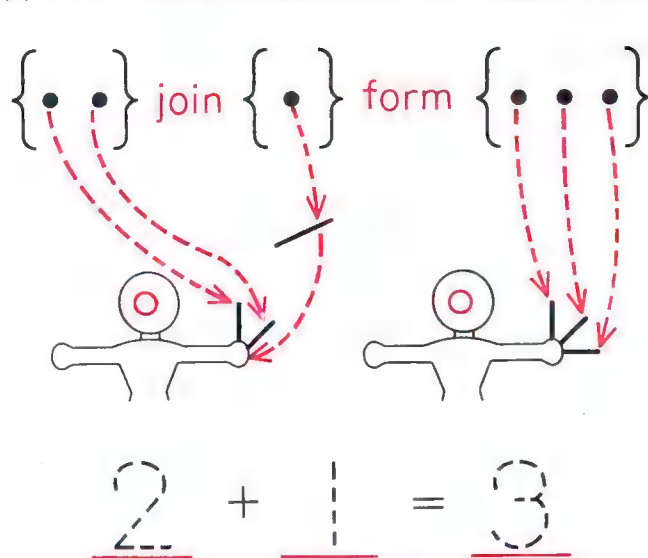
$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$$

Adding and Subtracting Tens

Write the addition or subtraction sentence for each picture.



Adding and Subtracting Tens

Write the correct numeral in each blank.

$$30 + 40 = \underline{3}T + \underline{4}T = \underline{7}T = \underline{70}$$

$$70 - 40 = \underline{7}T - \underline{4}T = \underline{3}T = \underline{30}$$

$$20 + 60 = \underline{\quad}T + \underline{\quad}T = \underline{\quad}T = \underline{\quad}$$

$$80 - 60 = \underline{\quad}T - \underline{\quad}T = \underline{\quad}T = \underline{\quad}$$

$$60 + 20 = \underline{\quad}T + \underline{\quad}T = \underline{\quad}T = \underline{\quad}$$

$$80 - 20 = \underline{\quad}T - \underline{\quad}T = \underline{\quad}T = \underline{\quad}$$

Find each sum or difference.

$$10 + 30 = \boxed{40}$$

$$30 + 10 = \boxed{\quad}$$

$$40 - 30 = \boxed{\quad}$$

$$40 - 10 = \boxed{\quad}$$

$$50 + 40 = \boxed{\quad}$$

$$40 + 50 = \boxed{\quad}$$

$$90 - 40 = \boxed{\quad}$$

$$90 - 50 = \boxed{\quad}$$

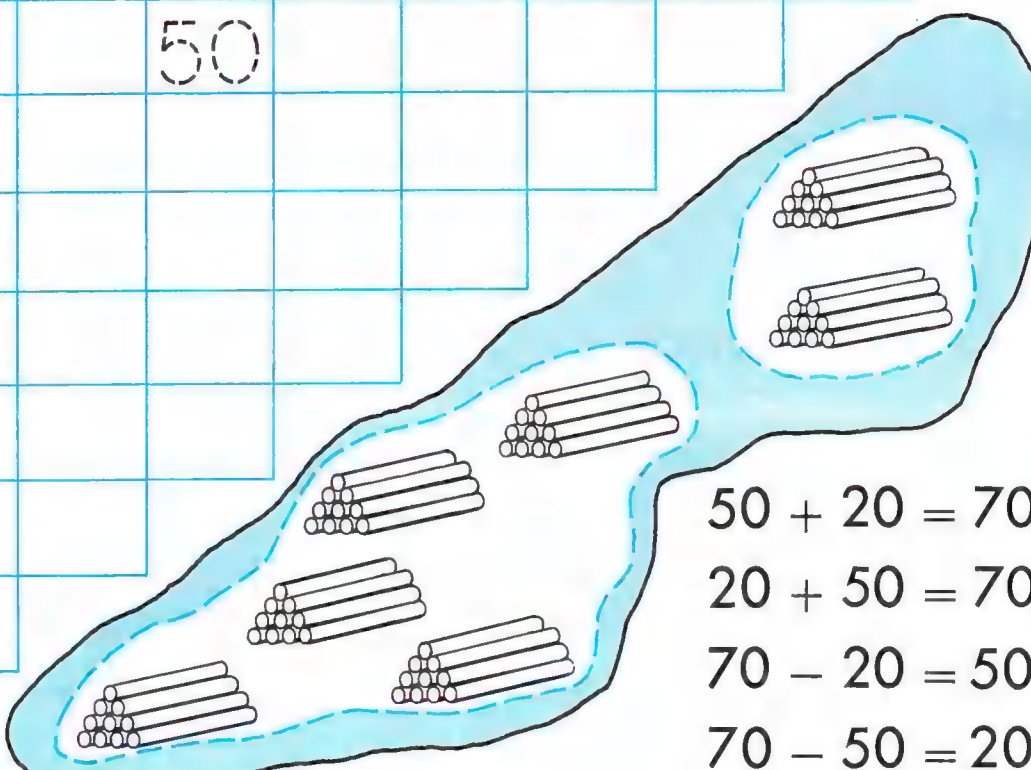
$$40 + 40 = \boxed{\quad}$$

$$80 - 40 = \boxed{\quad}$$

Adding and Subtracting Tens

Complete the addition and subtraction table below.

$\begin{array}{c} + \\ - \end{array}$	0	10	20	30	40	50	60	70	80	90
0	0									
10		20								
20				50						
30										
40										
50										
60										
70										
80										
90										



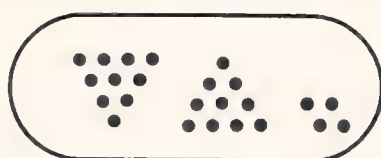
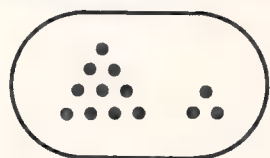
$50 + 20 = 70$
 $20 + 50 = 70$
 $70 - 20 = 50$
 $70 - 50 = 20$

Find the sum or difference.

$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$	$\begin{array}{c} \text{T} \text{O} \\ \hline \end{array}$
$\begin{array}{r} 60 \\ + 20 \\ \hline 80 \end{array}$	$\begin{array}{r} 20 \\ + 60 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ - 20 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ - 60 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ + 40 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ - 40 \\ \hline \end{array}$	
$\begin{array}{r} 40 \\ + 50 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ - 50 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ + 30 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ + 40 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ - 30 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ - 40 \\ \hline \end{array}$	

Adding with Two-Digit Numerals

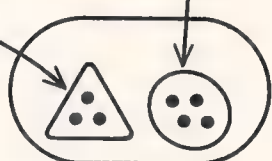
Study the set pictures. Then fill each blank correctly.



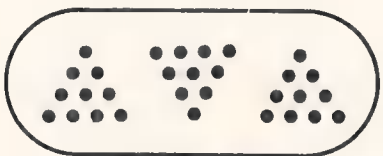
$$\underline{13} + \underline{24}$$



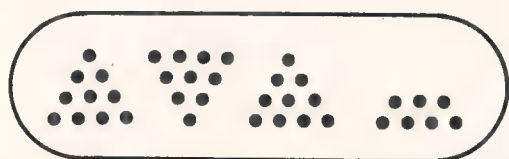
$$(10 + 3) + (20 + 4)$$



$$(10 + 20) + (3 + 4)$$



$$\underline{30} + \underline{7}$$



$$\underline{37}$$

Write the correct numeral in each blank.

$$13 + 24 = (\underline{10} + 3) + (\underline{20} + 4) = \underline{30} + \underline{7} = \underline{37}$$

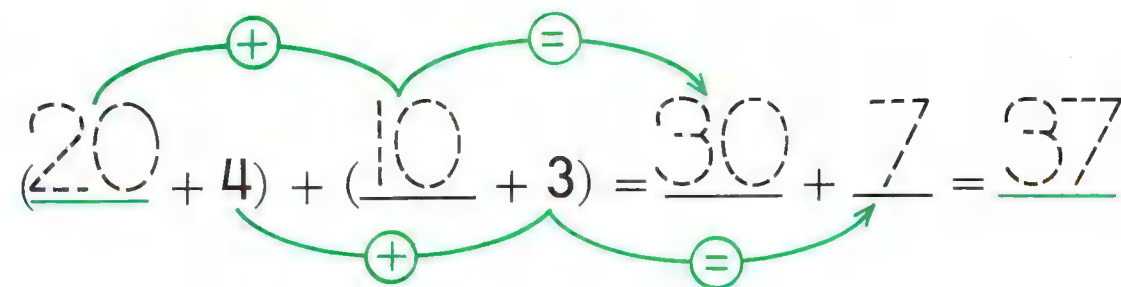
$$47 + 32 = (\underline{40} + 7) + (\underline{30} + 2) = \underline{70} + \underline{9} = \underline{79}$$

$$32 + 47 = (\underline{\quad} + 2) + (\underline{\quad} + 7) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

(sixty-seven) **67**

Adding with Two-Digit Numerals

Study the example. Write the correct numeral in each blank.

$$24 + 13 = (\underline{20} + \underline{4}) + (\underline{10} + \underline{3}) = \underline{30} + \underline{7} = \underline{37}$$


$$47 + 22 = (\underline{\quad} + \underline{7}) + (\underline{\quad} + \underline{2}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$47 + 12 = (\underline{\quad} + \underline{7}) + (\underline{\quad} + \underline{2}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$47 + 2 = (\underline{\quad} + \underline{7}) + (\underline{\quad} + \underline{2}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$78 + 11 = (\underline{\quad} + \underline{8}) + (\underline{\quad} + \underline{1}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$69 + 10 = (\underline{\quad} + \underline{9}) + (\underline{\quad} + \underline{0}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$10 + 69 = (\underline{\quad} + \underline{0}) + (\underline{\quad} + \underline{9}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$92 + 5 = (\underline{\quad} + \underline{2}) + (\underline{\quad} + \underline{5}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$45 + 54 = (\underline{\quad} + \underline{5}) + (\underline{\quad} + \underline{4}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$6 + 53 = (\underline{\quad} + \underline{6}) + (\underline{\quad} + \underline{3}) = \underline{\quad} + \underline{\quad} = \underline{\quad}$$

68 (sixty-eight)

Adding with Two-Digit Numerals

Study the examples. Then find each sum.

$$\begin{array}{r} 24 \\ + 13 \\ \hline \end{array} \quad \begin{array}{r} (20 + 4) \\ + (10 + 3) \\ \hline 30 + 7 = \underline{37} \end{array}$$

$$\begin{array}{r} 47 \\ + 32 \\ \hline \end{array} \quad \begin{array}{r} (40 + 7) \\ + (30 + 2) \\ \hline 70 + 9 = \underline{79} \end{array}$$

$$\begin{array}{r} 47 \\ + 22 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

$$\begin{array}{r} 24 \\ + 12 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

$$\begin{array}{r} 47 \\ + 12 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

$$\begin{array}{r} 31 \\ + 25 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

$$\begin{array}{r} 47 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

$$\begin{array}{r} 5 \\ + 92 \\ \hline \end{array} \quad \begin{array}{r} (\quad + \quad) \\ + (\quad + \quad) \\ \hline + \quad = \underline{\quad} \end{array}$$

(sixty-nine) 69

Adding with Two-Digit Numerals

Study the examples. Then find each sum.

	Think	Write		Think	Write
$\begin{array}{r} 47 \\ + 32 \\ \hline \end{array}$	$\begin{array}{r} (40 + 7) \\ + (30 + 2) \\ \hline 70 + 9 \end{array}$	$\begin{array}{r} 47 \\ + 32 \\ \hline 79 \end{array}$	$\begin{array}{r} 47 \\ + 32 \\ \hline 79 \end{array}$	$\begin{array}{r} \text{T} \text{O} \\ 4 7 \\ + 3 2 \\ \hline 7 9 \end{array}$	$\begin{array}{r} 47 \\ + 32 \\ \hline 79 \end{array}$

$$\begin{array}{r} \text{T} | \text{O} \\ 3 | 1 \\ + 2 | 5 \\ \hline 5 | 6 \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 2 | 5 \\ + 3 | 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 4 | 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 4 | 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 4 | 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 4 | 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 3 | 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 2 | 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 1 | 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ 5 | 6 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ + 34 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 31 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 92 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ + 25 \\ \hline \end{array}$$

Subtracting with Two-Digit Numerals

Study the examples. Then find each difference.

	Think	Write		Think	Write
				T O	
$\begin{array}{r} 79 \\ - 32 \\ \hline \end{array}$	$\begin{array}{l} (70 + 9) \\ -(30 + 2) \\ \hline 40 + 7 \end{array}$	$\begin{array}{r} 79 \\ - 32 \\ \hline 47 \end{array}$	$\begin{array}{r} 79 \\ - 32 \\ \hline \end{array}$	$\begin{array}{r} 79 \\ - 32 \\ \hline 47 \end{array}$	$\begin{array}{r} 79 \\ - 32 \\ \hline 47 \end{array}$

$$\begin{array}{r} \text{T O} \\ 56 \\ - 25 \\ \hline 31 \end{array}$$

$$\begin{array}{r} \text{T O} \\ 56 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 98 \\ - 42 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 98 \\ - 41 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 98 \\ - 40 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 78 \\ - 46 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 78 \\ - 36 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 78 \\ - 26 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 78 \\ - 16 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T O} \\ 78 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ - 12 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 79 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ - 92 \\ \hline \end{array}$$

$$\begin{array}{r} 77 \\ - 25 \\ \hline \end{array}$$

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. There were 23 boys in Jim's Cub Scout pack. Then 14 more boys joined. How many boys are there in the Cub Scout pack now?

$$\begin{array}{r} 23 \\ + 14 \\ \hline 37 \end{array}$$

37 boys

Work space

$$\begin{array}{r} 23 \\ + 14 \\ \hline 37 \end{array}$$

2. There are 15 girls and 11 boys in Ann's class. How many pupils are in her class?

3. Bob collects baseball pictures. He had 78 baseball pictures. He gave 25 to his brother. How many does Bob have now?

4. There are 25 girls in Beth's Brownie troop. Only 15 of them are going on a trip. How many are not going?

Adding with Two-Digit Numerals (Renaming Ones)

Study the example. Then find each sum.

Add the ones. Rename the ones. Add the tens.

$$\begin{array}{r} 47 \\ + 15 \\ \hline \end{array}$$

$$\begin{array}{r} 40 + 7 \\ 10 + 5 \end{array} \rightarrow 12 = 10 + 2$$

$$\begin{array}{r} 10 \\ 40 + 7 \\ 10 + 5 \\ \hline 60 + 2 = 62 \end{array}$$

Add the ones. Rename the ones. Add the tens.

$$\begin{array}{r} 47 \\ + 15 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ + 15 \end{array} \rightarrow 12 = 10 + 2$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 47 \\ + 15 \\ \hline 62 \end{array}$$

Add the ones. Rename the ones. Add the tens.

$$\begin{array}{r} 17 \\ + 16 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ + 16 \end{array} \rightarrow 13 = 10 + 3$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 17 \\ + 16 \\ \hline \end{array}$$

Add the ones. Rename the ones. Add the tens.

$$\begin{array}{r} 35 \\ + 29 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ + 29 \end{array} \rightarrow \square = \square + \square$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 35 \\ + 29 \\ \hline \end{array}$$

(seventy-three) 73

Adding with Two-Digit Numerals (Renaming Ones)

Study how the long form we used for adding is made shorter. Then find each sum.

Long Form

The diagram illustrates the long form for adding 47 and 15. It shows three stages: 1. The initial addition problem $\begin{array}{r} 47 \\ + 15 \\ \hline \end{array}$. 2. A middle step showing the decomposition of the ones: $12 = 10 + 2$, with a bracket under the 7 and 5 of the first problem pointing to the 12. 3. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 47 \\ + 15 \\ \hline 62 \end{array}$. Dashed arrows show the 10 being moved from the ones column to the tens column, and the 2 remaining in the ones column.

Shorter Form

The diagram illustrates the shorter form for adding 47 and 15. It shows two stages: 1. The initial addition problem $\begin{array}{r} 47 \\ + 15 \\ \hline \end{array}$. 2. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 1 \\ \hline 47 \\ + 15 \\ \hline 62 \end{array}$. A dashed arrow shows the 10 being moved from the ones column to the tens column.

The diagram illustrates the shorter form for adding 17 and 16. It shows two stages: 1. The initial addition problem $\begin{array}{r} \text{T} | \text{O} \\ \hline 17 \\ + 16 \\ \hline \end{array}$. 2. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 1 \\ \hline 17 \\ + 16 \\ \hline 33 \end{array}$. A dashed arrow shows the 10 being moved from the ones column to the tens column.

The diagram illustrates the shorter form for adding 35 and 29. It shows two stages: 1. The initial addition problem $\begin{array}{r} \text{T} | \text{O} \\ \hline 35 \\ + 29 \\ \hline \end{array}$. 2. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 1 \\ \hline 35 \\ + 29 \\ \hline 64 \end{array}$. A dashed arrow shows the 10 being moved from the ones column to the tens column.

The diagram illustrates the shorter form for adding 17 and 13. It shows two stages: 1. The initial addition problem $\begin{array}{r} \text{T} | \text{O} \\ \hline 17 \\ + 13 \\ \hline \end{array}$. 2. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 1 \\ \hline 17 \\ + 13 \\ \hline 30 \end{array}$. A dashed arrow shows the 10 being moved from the ones column to the tens column.

The diagram illustrates the shorter form for adding 35 and 25. It shows two stages: 1. The initial addition problem $\begin{array}{r} \text{T} | \text{O} \\ \hline 35 \\ + 25 \\ \hline \end{array}$. 2. The final result $\begin{array}{r} \text{T} | \text{O} \\ \hline 1 \\ \hline 35 \\ + 25 \\ \hline 60 \end{array}$. A dashed arrow shows the 10 being moved from the ones column to the tens column.

Adding with Two-Digit Numerals (Renaming Ones)

Find each sum.

See how some writing steps can be left out to shorten the work.

$$\begin{array}{r} \text{T} \text{O} \\ 49 \\ + 32 \\ \hline \end{array} \rightarrow \boxed{} = + $$

$$\begin{array}{r} \text{T} \text{O} \\ 32 \\ + 49 \\ \hline \end{array} \rightarrow \boxed{} = + $$

$$\begin{array}{r} \text{T} \text{O} \\ 49 \\ + 31 \\ \hline \end{array} \rightarrow \boxed{} = + $$

$$\begin{array}{r} \text{T} \text{O} \\ 31 \\ + 49 \\ \hline \end{array} \rightarrow \boxed{} = + $$

$$\begin{array}{r} \text{T} \text{O} \\ 37 \\ + 38 \\ \hline \end{array} \rightarrow \boxed{}$$

$$\begin{array}{r} \text{T} \text{O} \\ 37 \\ + 28 \\ \hline \end{array} \rightarrow \boxed{}$$

$$\begin{array}{r} \text{T} \text{O} \\ 37 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \text{O} \\ 37 \\ + 8 \\ \hline \end{array}$$

Adding with Two-Digit Numerals (Renaming Ones)

Find each sum.

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 24 \\ + 57 \\ \hline 81 \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 31 \\ + 19 \\ \hline 50 \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 47 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 68 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} | \text{O} \\ \hline 72 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 48 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 38 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 28 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ + 59 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ + 75 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \\ + 29 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 66 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ + 27 \\ \hline \end{array}$$

Subtracting with Two-Digit Numerals (Renaming Tens)

Sometimes we rename the number from which we subtract. Study why and how this is done in the examples below.

Then find each difference.

$$\begin{array}{r} 32 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} (30 + 2) \\ - (10 + 7) \\ \hline \end{array}$$

$$\begin{array}{r} (20 + 12) \\ - (10 + 7) \\ \hline 10 + 5 \end{array}$$

T	O
2	2
3	2
-1	7
1	5

Can we subtract the ones?

$$\begin{array}{r} 61 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} (60 + 1) \\ - (30 + 9) \\ \hline \end{array}$$

$$\begin{array}{r} (50 + 11) \\ - (30 + 9) \\ \hline 20 + 2 \end{array}$$

T	O
5	1
6	1
-3	9
2	2

$$\begin{array}{r} 30 \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} (30 + 0) \\ - (10 + 3) \\ \hline \end{array}$$

$$\begin{array}{r} (20 + 10) \\ - (10 + 3) \\ \hline \end{array}$$

T	O
3	0
-1	3

$$\begin{array}{r} 31 \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} (30 + 1) \\ - (10 + 3) \\ \hline \end{array}$$

$$\begin{array}{r} (20 + 11) \\ - (10 + 3) \\ \hline \end{array}$$

T	O
3	1
-1	3

Subtracting with Two-Digit Numerals (Renaming Tens)

Find each difference.

$$\begin{array}{r} 32 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} (30 + 2) \\ - (10 + 5) \\ \hline \end{array}$$

$$\begin{array}{r} (20 + 12) \\ - (10 + 5) \\ \hline 10 + 7 \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 2 \\ \hline 3 \\ - 1 \\ \hline 1 \\ 7 \end{array}$$

$$\begin{array}{r} 90 \\ - 46 \\ \hline \end{array}$$

$$\begin{array}{r} (90 + 0) \\ - (40 + 6) \\ \hline \end{array}$$

$$\begin{array}{r} (80 + 10) \\ - (40 + 6) \\ \hline 40 + 4 \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 8 \\ \hline 9 \\ - 4 \\ \hline 4 \\ 4 \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 8 \\ \hline 3 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 8 \\ \hline 4 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 8 \\ \hline 4 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 8 \\ \hline 4 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T|O} \\ 2 \\ \hline 1 \\ - 1 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 47 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 37 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 27 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 7 \\ \hline \end{array}$$

Subtracting with Two-Digit Numerals (Renaming Tens)

Find each difference.

$$\begin{array}{r} 30 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ - 28 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 94 \\ - 87 \\ \hline \end{array}$$

$$\begin{array}{r} 94 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} 67 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ - 26 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 53 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ - 59 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ - 29 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 1 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 57 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 58 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 67 \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ - 89 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ - 48 \\ \hline \end{array}$$

Adding and Subtracting with Two-Digit Numerals

Find each sum or difference.

$$\begin{array}{r} 65 \\ + 19 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 84 \\ - 19 \\ \hline 65 \end{array}$$

$$\begin{array}{r} 32 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ + 77 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ + 61 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 61 \\ \hline \end{array}$$

$$\begin{array}{r} 61 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ + 29 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 46 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ + 55 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ - 35 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 87 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 71 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ - 28 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 38 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ - 17 \\ \hline \end{array}$$

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. Mary misspelled 7 of 25 words. How many words did she spell correctly?

Work space

2. Miss Cane placed 18 books on an empty shelf. Later, she placed 17 more books on the same shelf. How many books did she place on the shelf?

3. John weighs 65 pounds. His sister weighs 49 pounds. How much more does John weigh?

4. On an arithmetic test, there were 15 addition problems and 9 subtraction problems. How many problems were there?

Adding Three Numbers

Find each sum.

$$(2 + 5) + 1 = \underline{7} + \underline{1} = \underline{8}$$

$$2 + (5 + 1) = \underline{2} + \underline{6} = \underline{8}$$

$$(20 + 50) + 10 = \underline{70} + \underline{10} = \underline{80}$$

$$20 + (50 + 10) = \underline{20} + \underline{60} = \underline{80}$$

Think	Think	Think
$\begin{array}{r} 4 \\ 2 \\ + 3 \\ \hline 9 \end{array}$ <p>Write</p>	$\begin{array}{r} 40 \\ 20 \\ + 30 \\ \hline 90 \end{array}$ <p>Write</p>	$\begin{array}{r} 40 \\ 20 \\ + 30 \\ \hline 90 \end{array}$ <p>Write</p>

T O	T O	T O	T O	T O
$\begin{array}{r} 50 \\ 30 \\ + 10 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ 30 \\ + 50 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ 10 \\ + 50 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ 50 \\ + 10 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ 10 \\ + 30 \\ \hline \end{array}$

$\begin{array}{r} 10 \\ 50 \\ + 30 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ 20 \\ + 20 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 40 \\ + 10 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ 10 \\ + 70 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ 30 \\ + 30 \\ \hline \end{array}$
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82 (eighty-two)

Adding Three Numbers

Find each sum.

Think

$$\begin{array}{r} 35 \\ 21 \\ + 42 \\ \hline \end{array}$$

Write

$$\begin{array}{r} 30 + 5 \\ 20 + 1 \\ 40 + 2 \\ \hline 90 + 8 \end{array}$$

98

Think

$$\begin{array}{r} 14 \\ 53 \\ + 12 \\ \hline \end{array}$$

Write

$$\begin{array}{r} 10 + 4 \\ 50 + 3 \\ 10 + 2 \\ \hline 70 + 9 \end{array}$$

79

$$\begin{array}{r|l} \text{T} & \text{O} \\ \hline 5 & 2 \\ 3 & 1 \\ + 1 & 4 \\ \hline \end{array}$$

$$\begin{array}{r|l} \text{T} & \text{O} \\ \hline 5 & 2 \\ 1 & 4 \\ + 3 & 1 \\ \hline \end{array}$$

$$\begin{array}{r|l} \text{T} & \text{O} \\ \hline 3 & 1 \\ 5 & 2 \\ + 1 & 4 \\ \hline \end{array}$$

$$\begin{array}{r|l} \text{T} & \text{O} \\ \hline 3 & 1 \\ 1 & 4 \\ + 5 & 2 \\ \hline \end{array}$$

$$\begin{array}{r|l} \text{T} & \text{O} \\ \hline 1 & 4 \\ 5 & 2 \\ + 3 & 1 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ 31 \\ + 52 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ 22 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ 20 \\ + 31 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ 33 \\ + 33 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ 21 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ 23 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ 13 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ 3 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 66 \\ 11 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 66 \\ 1 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ 41 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ 30 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ 8 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ 41 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ 30 \\ + 41 \\ \hline \end{array}$$

Adding Three Numbers

Find each sum.

Look for addition combinations of ten for easy addition.

36
18
+ 24

Add the ones.

Add the tens.

<p>T O</p> <p>23 17 + 45</p> <p>85</p>	<p>T O</p> <p>23 45 + 17</p>	<p>T O</p> <p>45 17 + 23</p>	<p>T O</p> <p>45 23 + 17</p>	<p>T O</p> <p>17 45 + 23</p>
<p>24 36 + 18</p>	<p>24 18 + 36</p>	<p>51 16 + 29</p>	<p>37 24 + 13</p>	<p>13 24 + 37</p>
<p>32 23 + 28</p>	<p>28 23 + 32</p>	<p>19 40 + 21</p>	<p>21 19 + 9</p>	<p>75 8 + 15</p>

84 (eighty-four)

Checkup Time

Find each sum or difference.

$$\begin{array}{r} 13 \\ + 52 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ + 62 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ + 37 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 67 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ - 33 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ - 16 \\ \hline \end{array}$$

$$\begin{array}{r} 85 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 2 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 20 \\ + 50 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ 5 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ 24 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ 9 \\ + 55 \\ \hline \end{array}$$

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

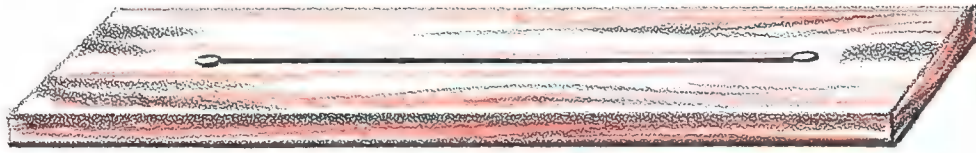
1. Lisa's grandmother is 57 years old. Lisa's mother is 29 years old. How many years older than her mother is her grandmother?

2. Scott has 38 marbles. Steve has 19 marbles. How many marbles do both boys have?

Work space

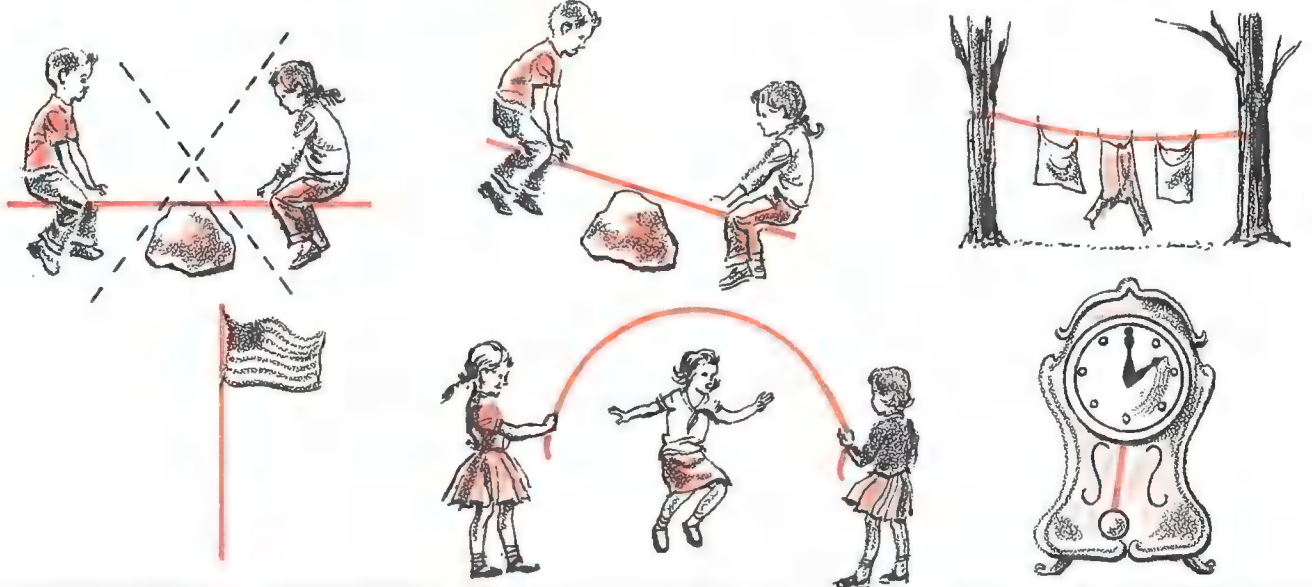
Line Segments

Two tacks are placed in a board as shown.
Then a thread is pulled tight between the tacks.

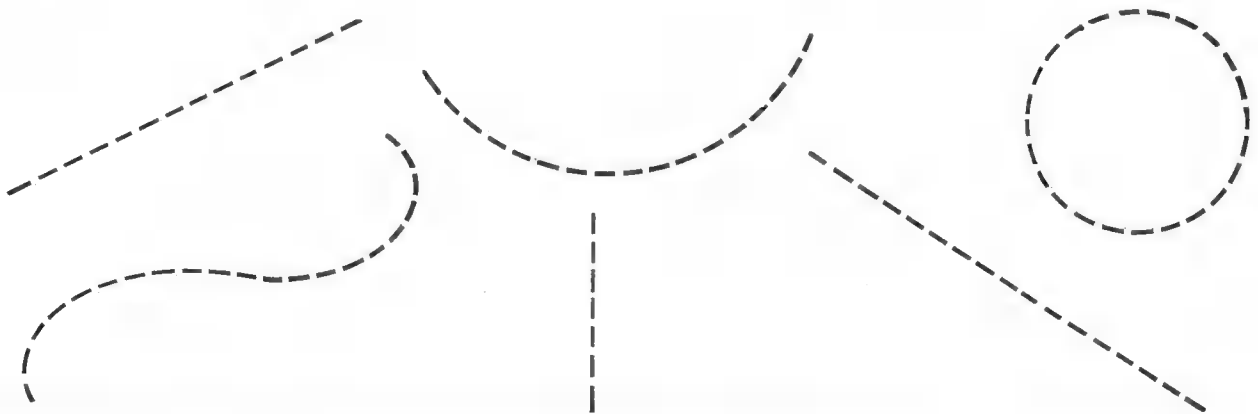


A thread pulled tight is said to be **straight**.
A thread pulled tight is a model of a **line segment**.
Like the thread, a line segment is straight.

Draw an X on each picture of a model of a line segment.



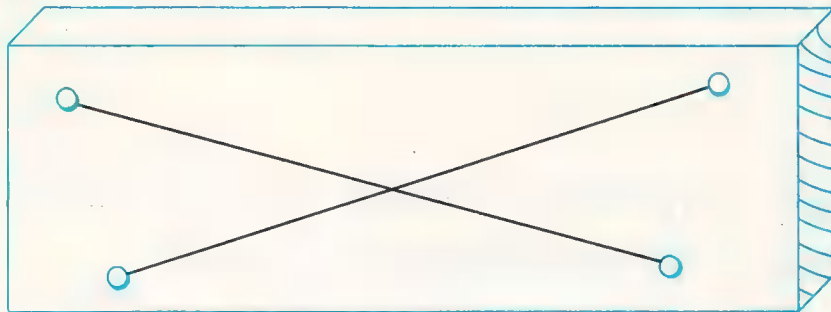
Using a ruler, complete each picture of a line segment.



Points

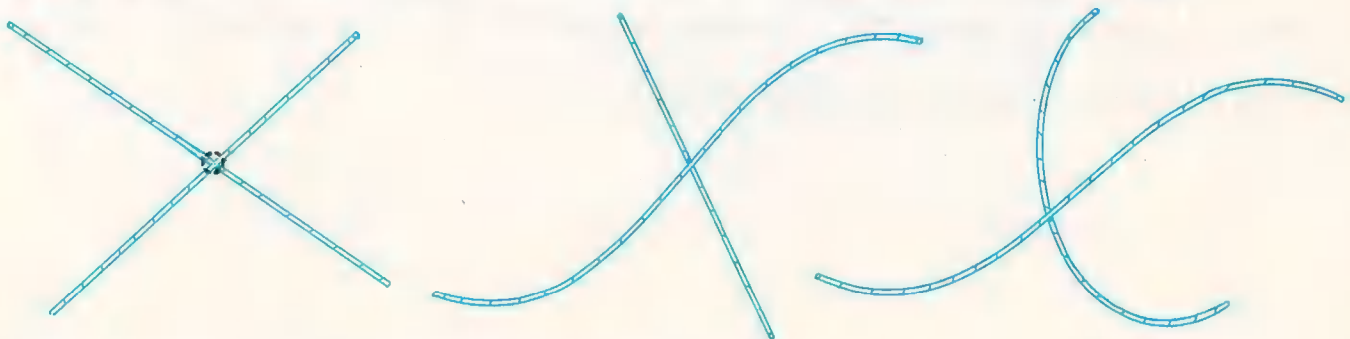
Four tacks are placed in a board as shown.

Then two threads are pulled tight between these tacks.



The spot where the threads meet is a model of a **point**.

Draw a dot where the threads of each pair below meet.



A dot may be used to picture a point.

A capital letter may be used to name a point.

Using a ruler, draw a line segment from point A to point B.

A •

• B

Points A and B are the **endpoints** of the line segment.

Using a ruler, draw the line segment with endpoints C and D.

Using a ruler, draw the line segment with endpoints Q and P.

C •

• Q

• D

P •

Points and Line Segments

Draw a line segment. Label its endpoints X and Z.



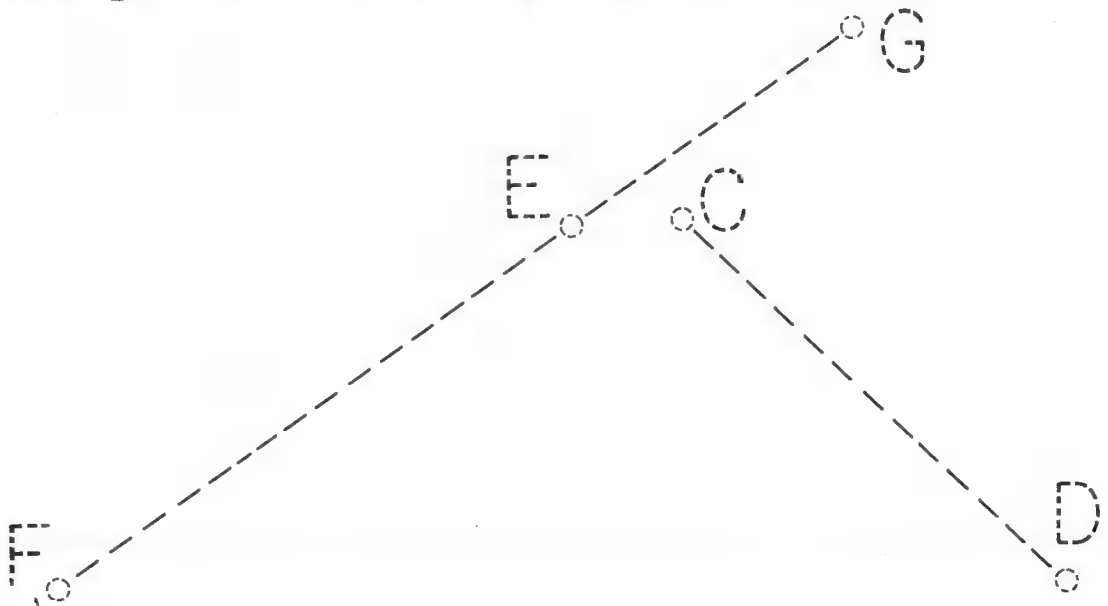
A line segment is named by using the names of its endpoints. The line segment pictured above is called

line segment XZ or line segment ZX.

Draw line segment ST. Draw point R **on** line segment ST. Draw point U **not on** line segment ST.



Draw point E. Draw line segment FG **on** point E. Draw line segment CD **not on** point E.



Points and Line Segments

Draw line segment AB. Draw point C on line segment AB.
Draw point D not on line segment AB.

Draw point Z. Draw line segment XY on point Z.
Draw line segment VW not on point Z.

Draw line segments EF and GH.

E •

• G

H •

• F

Label the point which is on both line segments as point J.

Draw line segments KL, MN, and PQ.

• M

• Q

K •

• L

P •

• N

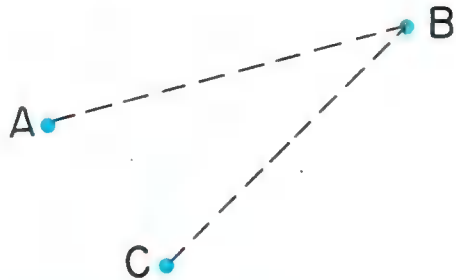
Label the point which is on all the line segments as point T.

Geometric Figures

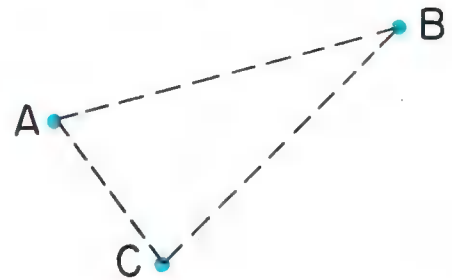
Line segments may be joined to form figures.

Draw figures by drawing the line segments named below.

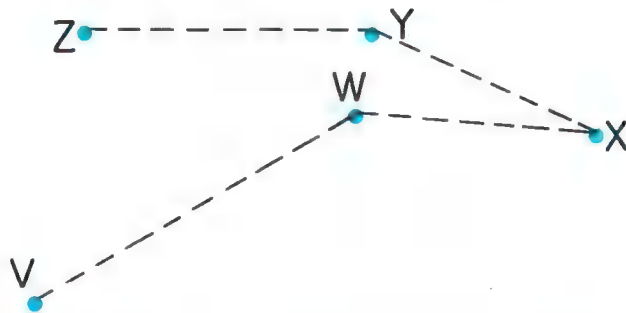
AB and BC



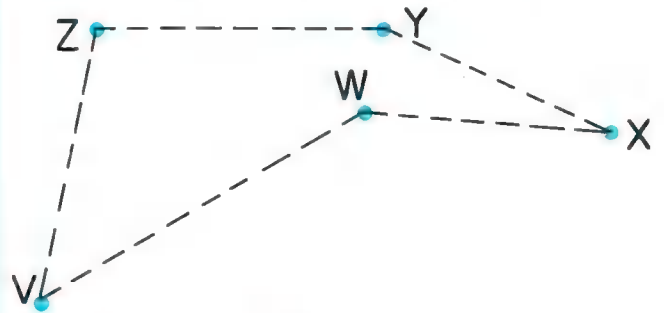
AB, BC, and CA



ZY, YX, XW, and WV



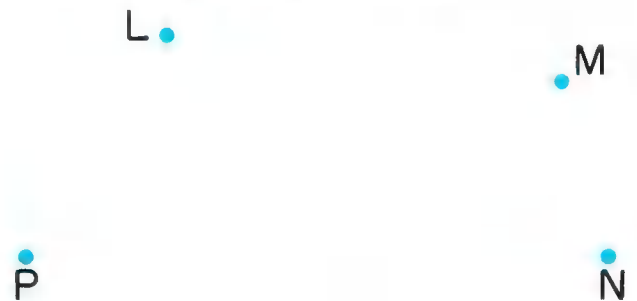
ZY, YX, XW, WV, and VZ



LM, MN, and NP



LM, MN, NP, and PL



DE, EF, FG, GH, and HJ



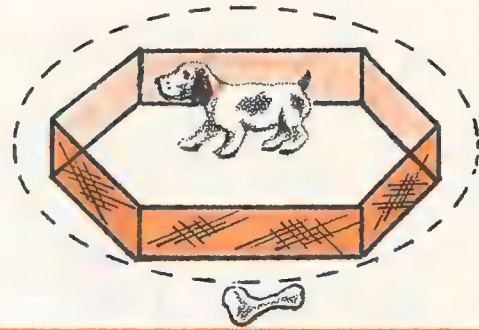
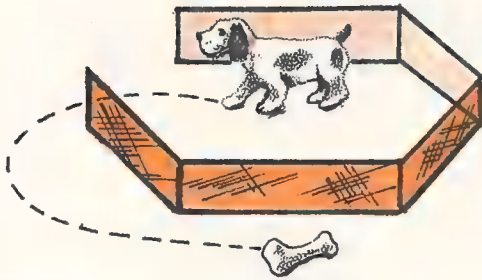
DE, EF, FG, GH, HJ, and JD



Open and Closed Geometric Figures

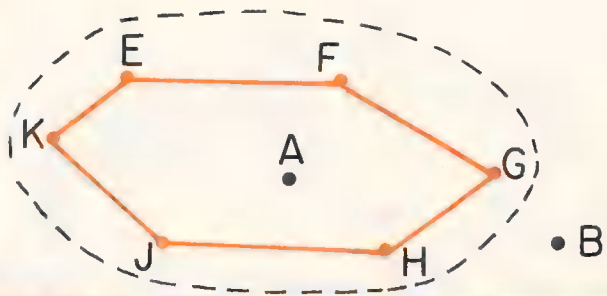
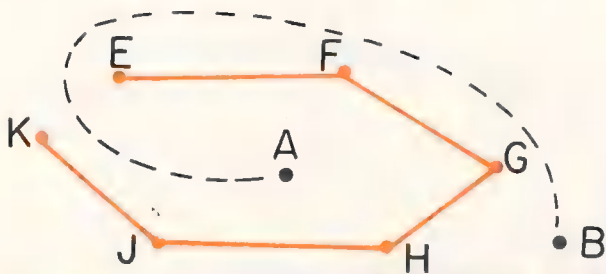
Draw a path that shows which pen is open.

Draw a ring around the pen which is closed.



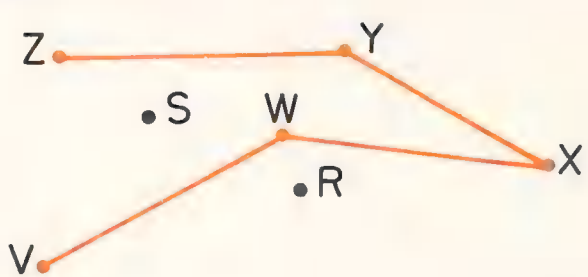
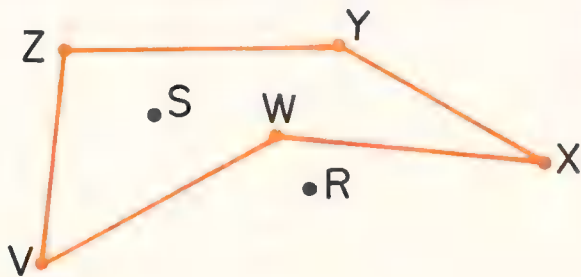
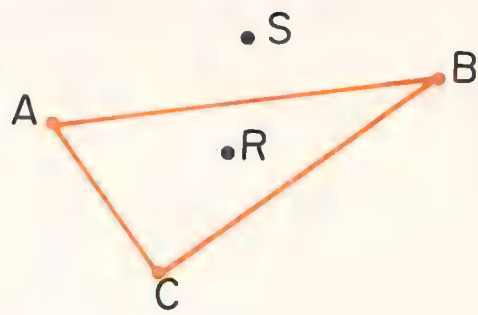
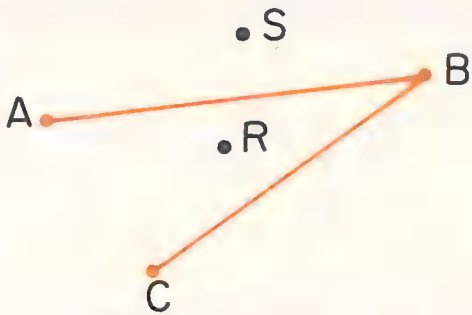
Draw a path that shows which figure is open.

Draw a ring around the figure which is closed.



Draw a path from R to S that shows each open figure.

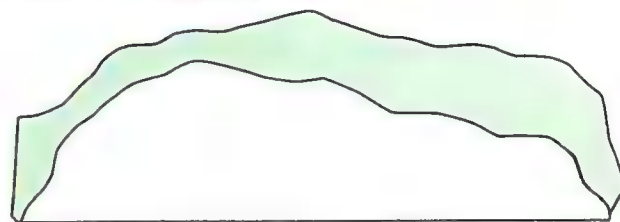
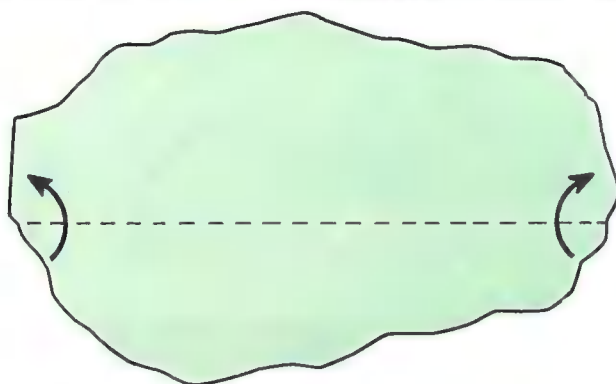
Draw a ring around each closed figure.



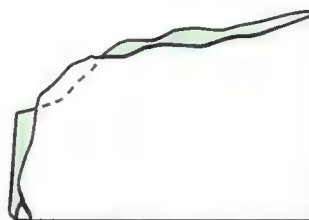
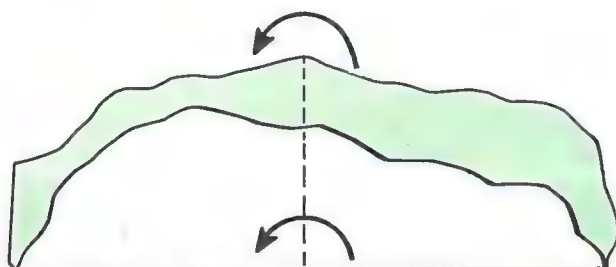
Right Corners

Use a piece of paper of any shape.

Fold it once to make a model of a line segment.



Fold it again keeping the first fold on the same line segment.

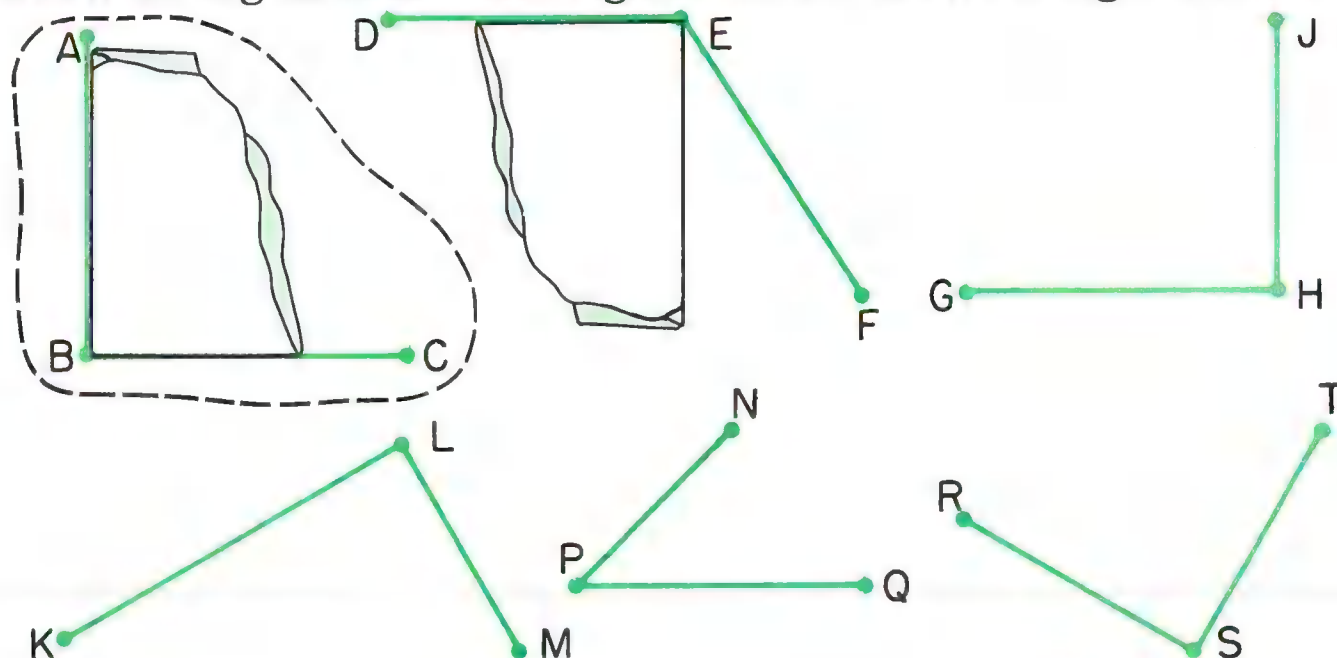


The two folds now form a model of a **right corner**.

Save this right corner. You will use it later.

Using the model you have just made, test the figures below.

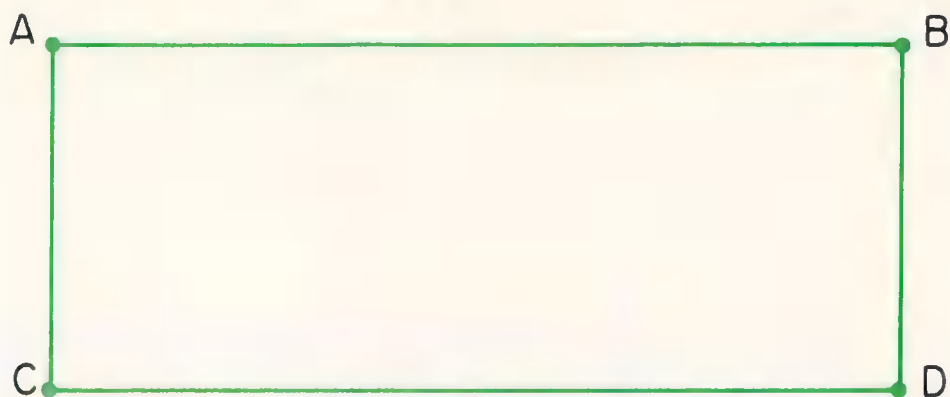
Draw a ring around each figure which shows a right corner.



Rectangles

Count the line segments which form this closed figure.

Use your paper model of a right corner to test each corner.

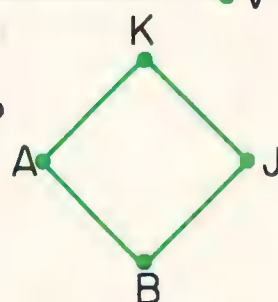
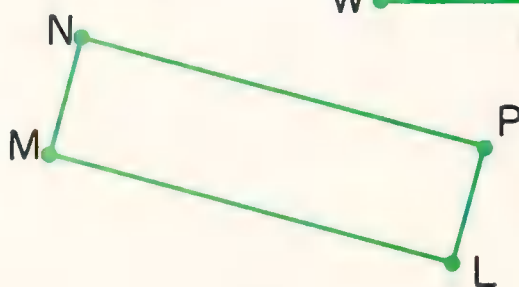
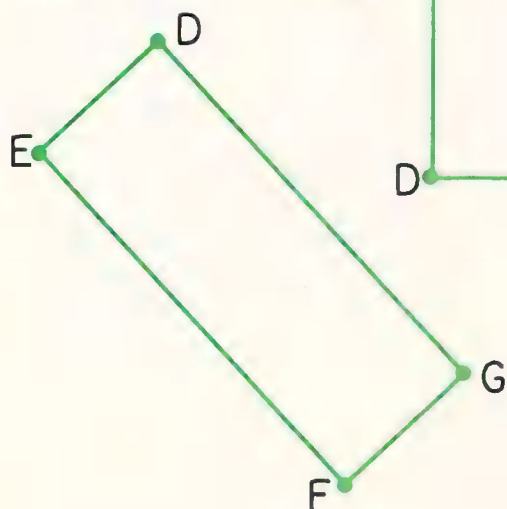
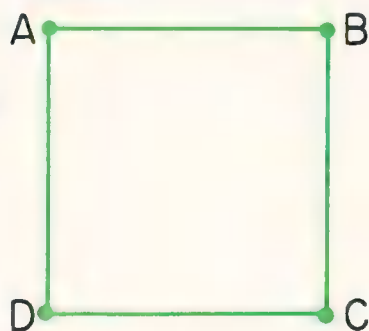
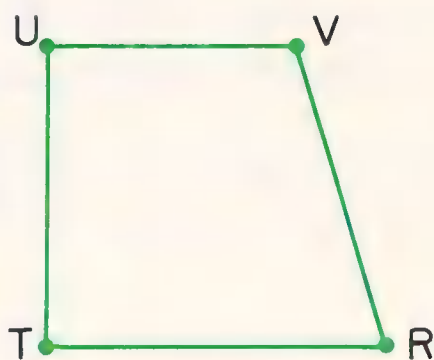
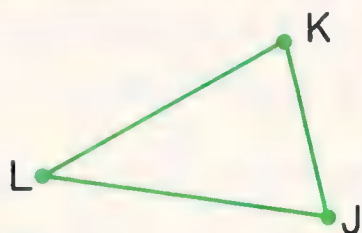
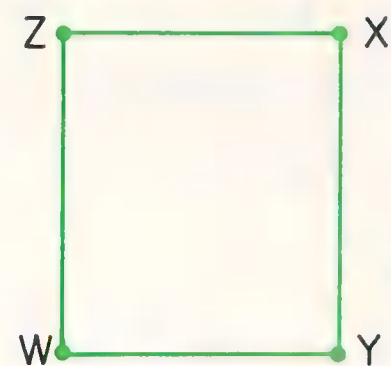


Line segments forming a closed figure are called **sides**.

The figure above has 4 sides and 4 right corners.
Such a figure is called a **rectangle**.

Use your model right corner to test each corner.

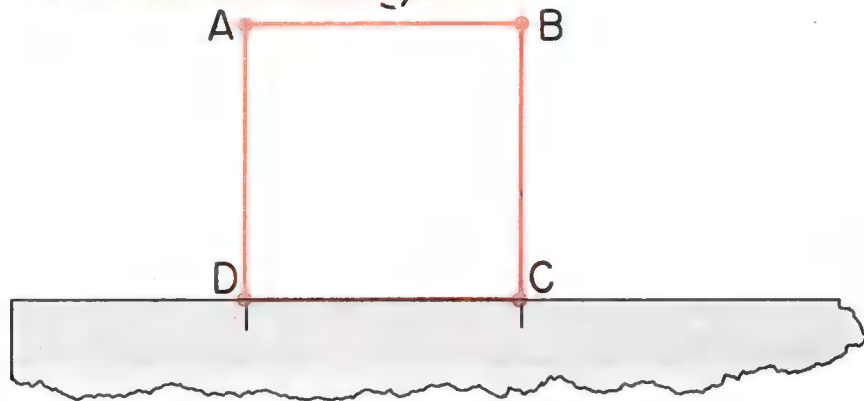
Then mark an X in each picture of a rectangle.



Squares — Special Rectangles

Use your model right corner to test each corner of the figure.

The figure is a rectangle.



Make a paper model of one side of the figure as follows.

- (1) Lay the straight edge of a piece of paper along one side.
- (2) Make two marks on the paper at the endpoints of the side.

Now lay this model of a side along each of the other 3 sides.

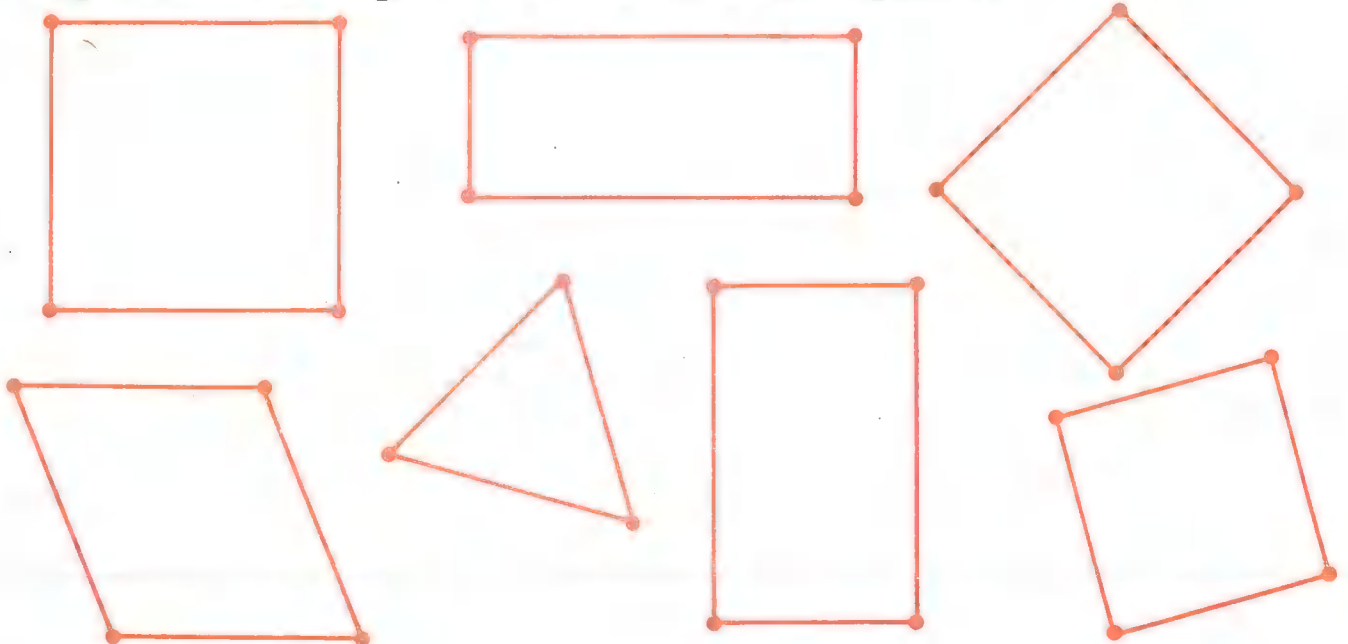
The two marks match with the endpoints of each other side.

We say that all of the sides are of **equal length**.

A rectangle with sides of equal length is called a **square**.

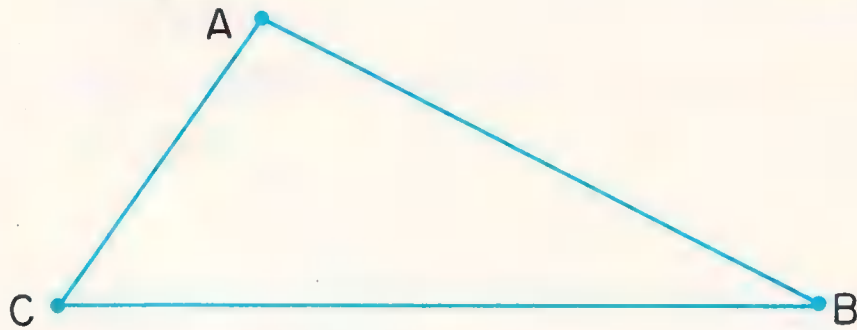
Test the corners and the sides of each figure below.

Ring each rectangle. Write S in each square.



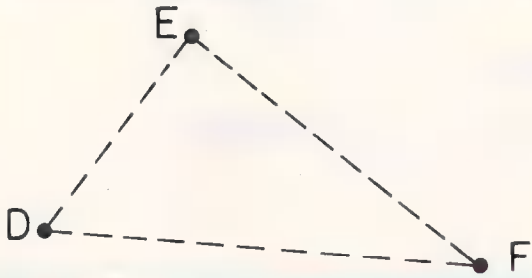
Triangles

Count the line segments which form this closed figure.

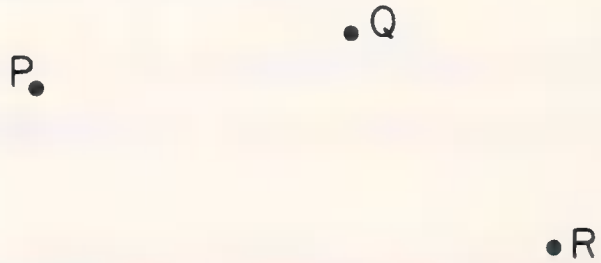


The figure above has 3 sides and 3 corners.
Such a figure is called a **triangle**.

Draw a triangle.



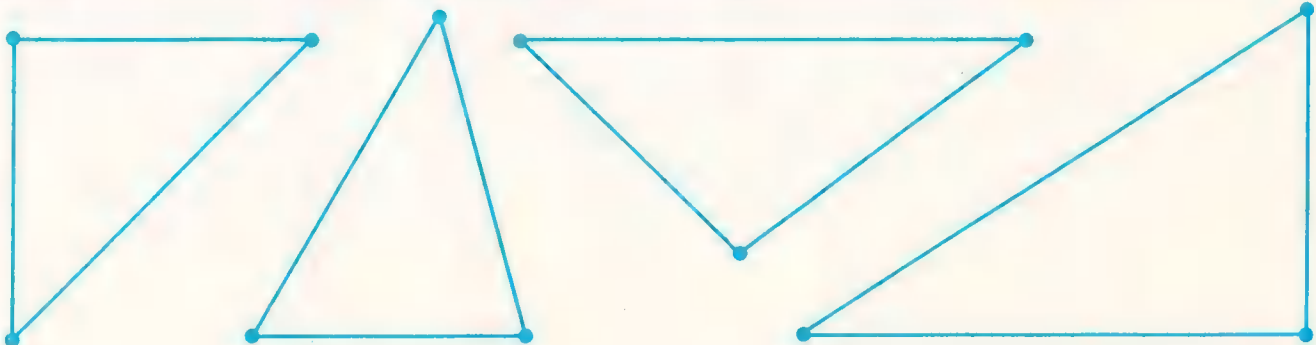
Draw a triangle.



Draw a triangle.

Draw a triangle.

Use your model of a right corner to test each corner.
Mark an X in each triangle having one right corner.

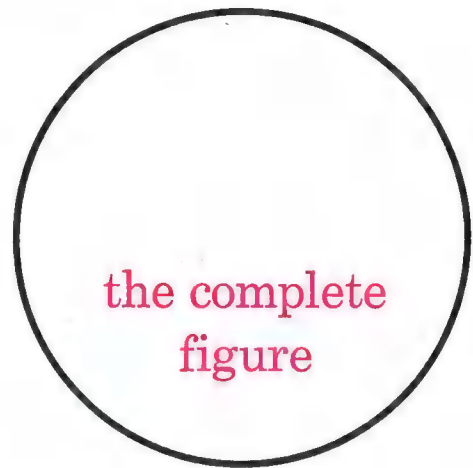
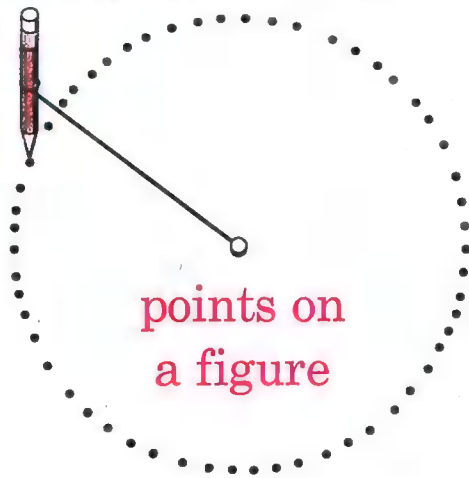


Circles

A tack is placed in a board. A string is tied to the tack.

A pencil is tied to the other end of the string.

With string tight and pencil upright, many dots are drawn.



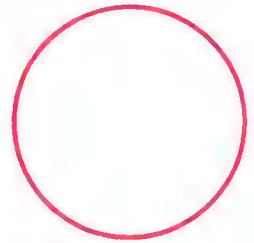
Each dot pictures a point on a figure.

The complete figure is **closed** and is called a **circle**.

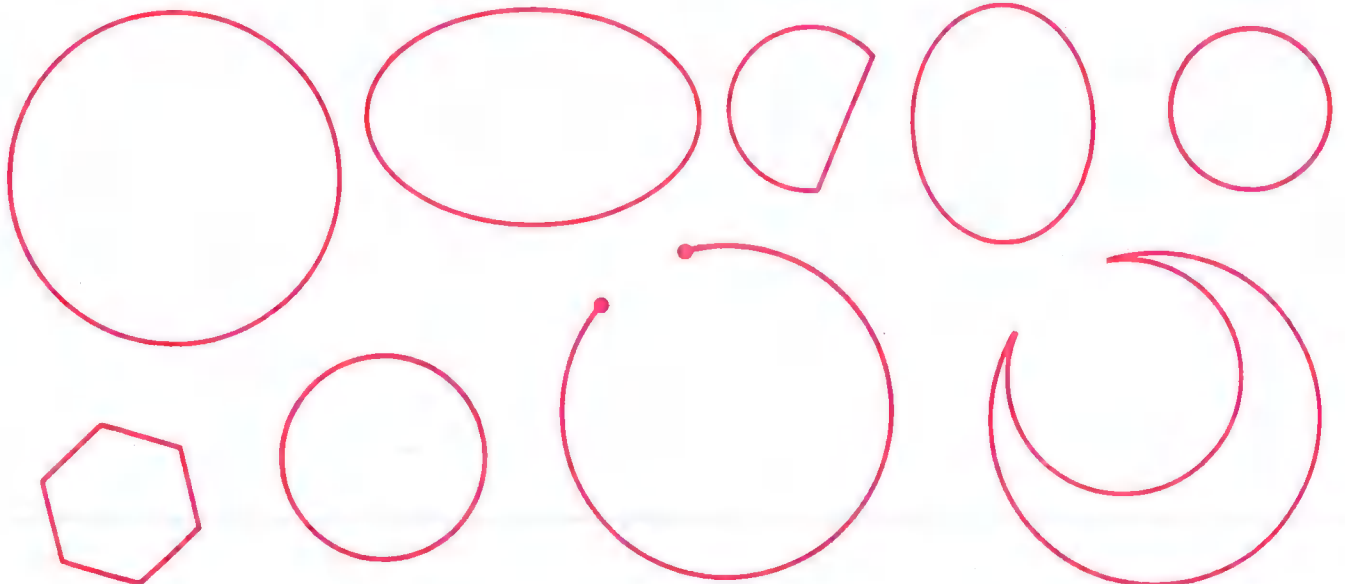
Draw point A **on** the circle.

Draw point B **inside** the circle.

Draw point C **outside** the circle.



Write C in each circle below.



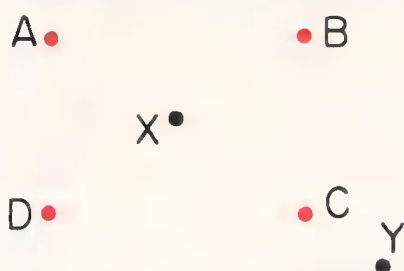
Checkup Time

Draw line segment RS. Draw point T on line segment RS.
Draw point U not on line segment RS.

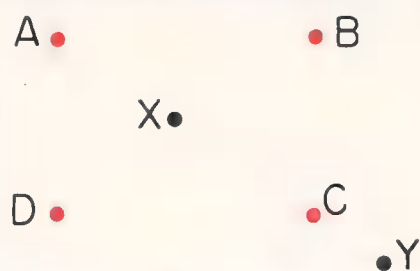
Draw line segment AC on point B.

Draw figures by drawing the line segments named below.
Draw a path from X to Y that shows each open figure.
Draw a ring around each closed figure.

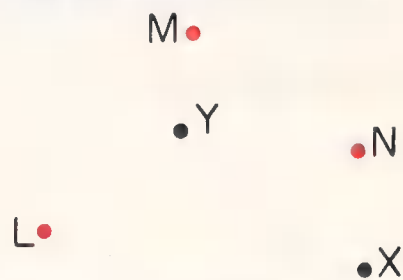
AB, BC, and CD



AB, BC, CD, and DA

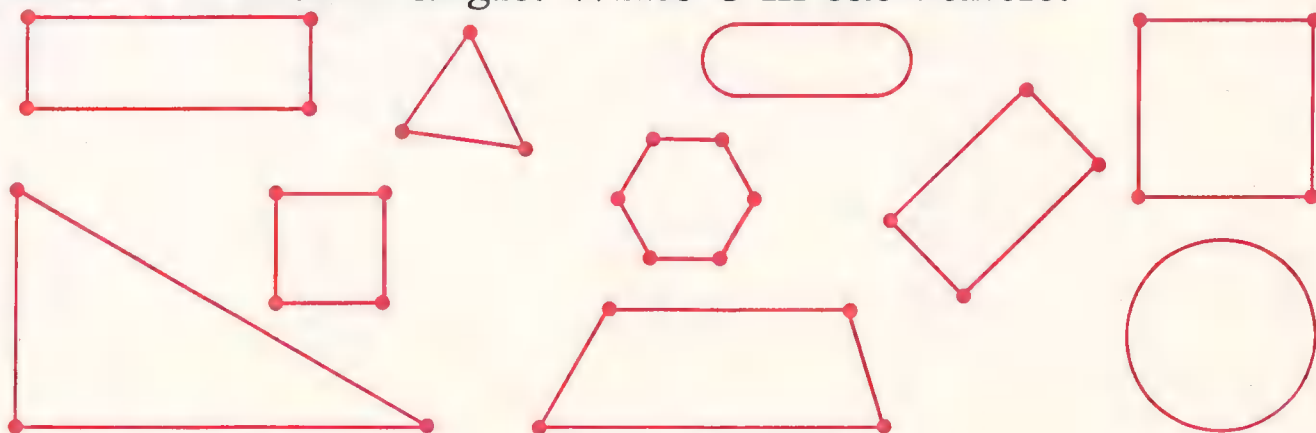


LM, MN, and NL



Ring each rectangle. Write S in each square.

Write T in each triangle. Write C in each circle.



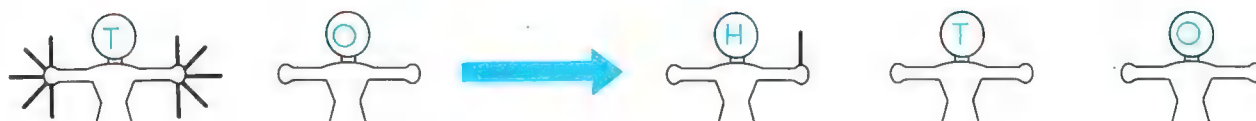
Adding Tens (Renaming Ten Tens)

Study the counting-man pictures below.



ten ones = 10

Another name for ten ones is 10.



10 tens = 100

Another name for 10 tens is 100.

Find each sum.

$$\begin{array}{r} 8 \\ + 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 80 \\ + 20 \\ \hline \end{array}$$

Think
8 tens
+ 2 tens
10 tens

Write

$$\begin{array}{r} 80 \\ + 20 \\ \hline 100 \end{array}$$

$$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 40 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ + 80 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ + 70 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ + 50 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ + 90 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ + 60 \\ \hline \end{array}$$

98 (ninety-eight)

Adding Tens (Renaming Ten Tens)

Find each sum.

$$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$$

Think

$$\begin{array}{r} 8 \\ + (2 + 3) \\ \hline 10 + 3 = 13 \end{array}$$

Write

$$\begin{array}{r} 8 \\ + 5 \\ \hline 13 \end{array}$$

Another name for one ten and three ones is 13.

$$\begin{array}{r} 80 \\ + 50 \\ \hline \end{array}$$

Think

$$\begin{array}{r} 8 \text{ tens} \\ + (2 \text{ tens} + 3 \text{ tens}) \\ \hline 10 \text{ tens} + 3 \text{ tens} = 13 \text{ tens} \\ 100 + 30 = 130 \end{array}$$

Write

$$\begin{array}{r} 80 \\ + 50 \\ \hline 130 \end{array}$$

Another name for 13 tens is 130.

Find each sum.

$$\begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 60 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ + 70 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 50 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ + 80 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 90 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ + 90 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ + 60 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ + 80 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ + 40 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 40 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ + 90 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 90 \\ \hline \end{array}$$

Adding Tens (Renaming Ten Tens)

Complete the addition table below.

+	0	10	20	30	40	50	60	70	80	90
0	0									90
10		20								100
20									100	110
30										
40										
50										
60										
70										
80										
90										

Write the correct numeral in each rectangle.

$70 + \boxed{30} = 100$

$\boxed{} + 30 = 100$

$50 + \boxed{} = 100$

$\boxed{} + 60 = 110$

$20 + \boxed{} = 110$

$\boxed{} + 60 = 150$

$90 + \boxed{} = 160$

$\boxed{} + 90 = 180$

100 (one hundred)

Addition (Renaming Tens or Ones)

Find each sum.

$$\begin{array}{r} 74 \\ + 36 \\ \hline \end{array}$$

Add the ones

$$\begin{array}{r} 74 \\ + 36 \\ \hline \end{array}$$

Add the tens

$$\begin{array}{r} 74 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ + 73 \\ \hline \end{array}$$

Add the ones

$$\begin{array}{r} 89 \\ + 73 \\ \hline \end{array}$$

Add the tens

$$\begin{array}{r} 89 \\ + 73 \\ \hline \end{array}$$

H	T	O
	6	7
+	4	3

H	T	O
	9	3
+	5	9

H	T	O
	7	2
+	3	8

H	T	O
	8	5
+	6	7

H	T	O
	5	8
+	5	6

$$\begin{array}{r} 36 \\ + 64 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ + 80 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ + 98 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ + 94 \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 99 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ + 86 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ + 99 \\ \hline \end{array}$$

Subtraction (Renaming Hundreds or Tens)

Find each difference.

$\begin{array}{r} 100 \\ - 20 \\ \hline \end{array}$	Think 10 tens $- 2$ tens <hr/> 8 tens	Write $\begin{array}{r} 100 \\ - 20 \\ \hline 80 \end{array}$
--	---	---

$\begin{array}{r} 110 \\ - 36 \\ \hline \end{array}$	Think $(100 + 10)$ $-(30 + 6)$ <hr/> $70 + 4 = 74$	Write $\begin{array}{r} 110 \\ - 36 \\ \hline 74 \end{array}$
--	--	---

$\begin{array}{r} 152 \\ - 89 \\ \hline \end{array}$	Think $(100 + 50 + 2)$ $-(80 + 9)$ <hr/> 3	$(100 + 40 + 12)$ $-(80 + 9)$ <hr/> $60 + 3$	Write $\begin{array}{r} 152 \\ - 89 \\ \hline 63 \end{array}$
--	--	--	---

$\begin{array}{r} 100 \\ - 10 \\ \hline \end{array}$	$\begin{array}{r} 100 \\ - 30 \\ \hline \end{array}$	$\begin{array}{r} 100 \\ - 60 \\ \hline \end{array}$	$\begin{array}{r} 100 \\ - 80 \\ \hline \end{array}$	$\begin{array}{r} 100 \\ - 90 \\ \hline \end{array}$
--	--	--	--	--

$\begin{array}{r} 110 \\ - 47 \\ \hline \end{array}$	$\begin{array}{r} 112 \\ - 58 \\ \hline \end{array}$	$\begin{array}{r} 117 \\ - 39 \\ \hline \end{array}$	$\begin{array}{r} 120 \\ - 63 \\ \hline \end{array}$	$\begin{array}{r} 133 \\ - 75 \\ \hline \end{array}$
--	--	--	--	--

$\begin{array}{r} 161 \\ - 72 \\ \hline \end{array}$	$\begin{array}{r} 173 \\ - 85 \\ \hline \end{array}$	$\begin{array}{r} 126 \\ - 52 \\ \hline \end{array}$	$\begin{array}{r} 183 \\ - 47 \\ \hline \end{array}$	$\begin{array}{r} 196 \\ - 9 \\ \hline \end{array}$
--	--	--	--	---

102 (one hundred two)

Adding Hundreds

Find each sum.

$$\begin{array}{r} 3 \\ + 4 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 30 \\ + 40 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 300 \\ + 400 \\ \hline 700 \end{array}$$

$$\begin{array}{r} 7 \\ + 2 \\ \hline 9 \end{array}$$

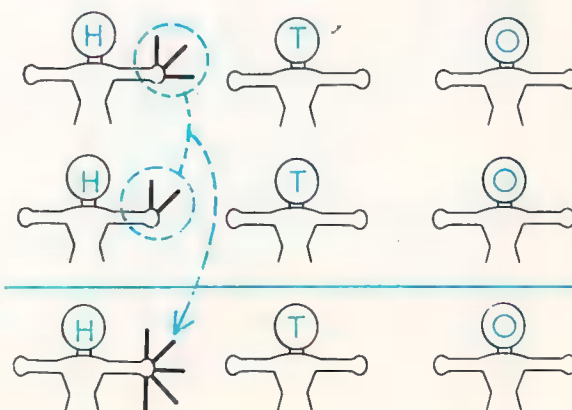
$$\begin{array}{r} 70 \\ + 20 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 700 \\ + 200 \\ \hline 900 \end{array}$$

Complete the addition table below.

+	0	100	200	300	400	500	600	700	800	900
0										
100			300							
200				500						
300										
400										
500			700							
600										
700										
800										
900										

$$\begin{array}{r} 300 \\ + 200 \\ \hline 500 \end{array}$$



(one hundred three) 103

Adding with Three-Digit Numerals

Find each sum.

$$\begin{array}{r} 250 \\ + 320 \\ \hline \end{array}$$

Think
 $200 + 50$
 $+ (300 + 20)$
 $500 + 70 = 570$

Write
 $\begin{array}{r} 250 \\ + 320 \\ \hline 570 \end{array}$

$$\begin{array}{r} 614 \\ + 135 \\ \hline \end{array}$$

Think
 $600 + 10 + 4$
 $+ (100 + 30 + 5)$
 $700 + 40 + 9 = 749$

Write
 $\begin{array}{r} 614 \\ + 135 \\ \hline 749 \end{array}$

H	T	O
2	0	0
+	4	0
<hr/>		

H	T	O
2	3	0
+	4	1
<hr/>		

H	T	O
2	3	5
+	4	1
<hr/>		

H	T	O
3	6	1
+	4	2
<hr/>		

H	T	O
4	2	8
+	3	6
<hr/>		

$$\begin{array}{r} 500 \\ + 300 \\ \hline \end{array}$$

$$\begin{array}{r} 540 \\ + 320 \\ \hline \end{array}$$

$$\begin{array}{r} 540 \\ + 302 \\ \hline \end{array}$$

$$\begin{array}{r} 504 \\ + 320 \\ \hline \end{array}$$

$$\begin{array}{r} 504 \\ + 302 \\ \hline \end{array}$$

$$\begin{array}{r} 214 \\ + 732 \\ \hline \end{array}$$

$$\begin{array}{r} 732 \\ + 214 \\ \hline \end{array}$$

$$\begin{array}{r} 315 \\ + 174 \\ \hline \end{array}$$

$$\begin{array}{r} 174 \\ + 315 \\ \hline \end{array}$$

$$\begin{array}{r} 222 \\ + 444 \\ \hline \end{array}$$

$$\begin{array}{r} 640 \\ + 105 \\ \hline \end{array}$$

$$\begin{array}{r} 562 \\ + 437 \\ \hline \end{array}$$

$$\begin{array}{r} 437 \\ + 562 \\ \hline \end{array}$$

$$\begin{array}{r} 701 \\ + 107 \\ \hline \end{array}$$

$$\begin{array}{r} 107 \\ + 892 \\ \hline \end{array}$$

104 (one hundred four)

Adding with Three-Digit Numerals

Find each sum.

$$\begin{array}{r} 701 \\ + 200 \\ \hline \end{array}$$

$$\begin{array}{r} 720 \\ + 270 \\ \hline \end{array}$$

$$\begin{array}{r} 727 \\ + 272 \\ \hline \end{array}$$

$$\begin{array}{r} 707 \\ + 272 \\ \hline \end{array}$$

$$\begin{array}{r} 727 \\ + 202 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 455 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 355 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 255 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 155 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 55 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 35 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 25 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 15 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 185 \\ + 204 \\ \hline \end{array}$$

$$\begin{array}{r} 204 \\ + 185 \\ \hline \end{array}$$

$$\begin{array}{r} 402 \\ + 185 \\ \hline \end{array}$$

$$\begin{array}{r} 185 \\ + 402 \\ \hline \end{array}$$

$$\begin{array}{r} 333 \\ + 406 \\ \hline \end{array}$$

$$\begin{array}{r} 225 \\ + 472 \\ \hline \end{array}$$

$$\begin{array}{r} 125 \\ + 472 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ + 472 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ + 472 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 472 \\ \hline \end{array}$$

$$\begin{array}{r} 357 \\ + 231 \\ \hline \end{array}$$

$$\begin{array}{r} 753 \\ + 213 \\ \hline \end{array}$$

$$\begin{array}{r} 403 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 403 \\ \hline \end{array}$$

$$\begin{array}{r} 715 \\ + 84 \\ \hline \end{array}$$

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. On a trip, Hal's family traveled 185 miles one day and 211 miles the next day. How many miles did they travel?

Work space

2. Doris made a necklace with 45 blue beads and 68 white beads. How many beads were on the necklace?

3. In a year, 241 days had past and 124 were left. How many days were in the year?

4. Bill has 302 bottle caps. To make a design on his clubhouse, he needs 76 more. How many caps does he need in all?

Subtracting with Three-Digit Numerals

Find each difference.

$\begin{array}{r} 570 \\ - 320 \\ \hline \end{array}$	Think $(500+70)$ $-(300+20)$ $200+50=250$	Write $\begin{array}{r} 570 \\ - 320 \\ \hline 250 \end{array}$
---	---	---

$\begin{array}{r} 749 \\ - 135 \\ \hline \end{array}$	Think $(700+40+9)$ $-(100+30+5)$ $600+10+4=614$	Write $\begin{array}{r} 749 \\ - 135 \\ \hline 614 \end{array}$
---	---	---

$\begin{array}{r l l} \text{H} & \text{T} & \text{O} \\ \hline 6 & 0 & 0 \\ - 4 & 0 & 0 \\ \hline & & \end{array}$	$\begin{array}{r l l} \text{H} & \text{T} & \text{O} \\ \hline 6 & 4 & 0 \\ - 4 & 1 & 0 \\ \hline & & \end{array}$	$\begin{array}{r l l} \text{H} & \text{T} & \text{O} \\ \hline 6 & 4 & 8 \\ - 4 & 1 & 3 \\ \hline & & \end{array}$	$\begin{array}{r l l} \text{H} & \text{T} & \text{O} \\ \hline 7 & 8 & 9 \\ - 4 & 2 & 8 \\ \hline & & \end{array}$	$\begin{array}{r l l} \text{H} & \text{T} & \text{O} \\ \hline 7 & 8 & 9 \\ - 3 & 6 & 1 \\ \hline & & \end{array}$
--	--	--	--	--

$\begin{array}{r} 800 \\ - 300 \\ \hline \end{array}$	$\begin{array}{r} 860 \\ - 320 \\ \hline \end{array}$	$\begin{array}{r} 842 \\ - 302 \\ \hline \end{array}$	$\begin{array}{r} 824 \\ - 320 \\ \hline \end{array}$	$\begin{array}{r} 806 \\ - 302 \\ \hline \end{array}$
---	---	---	---	---

$\begin{array}{r} 946 \\ - 214 \\ \hline \end{array}$	$\begin{array}{r} 946 \\ - 732 \\ \hline \end{array}$	$\begin{array}{r} 489 \\ - 315 \\ \hline \end{array}$	$\begin{array}{r} 489 \\ - 174 \\ \hline \end{array}$	$\begin{array}{r} 666 \\ - 222 \\ \hline \end{array}$
---	---	---	---	---

$\begin{array}{r} 437 \\ - 326 \\ \hline \end{array}$	$\begin{array}{r} 728 \\ - 608 \\ \hline \end{array}$	$\begin{array}{r} 583 \\ - 402 \\ \hline \end{array}$	$\begin{array}{r} 603 \\ - 301 \\ \hline \end{array}$	$\begin{array}{r} 741 \\ - 501 \\ \hline \end{array}$
---	---	---	---	---

Subtracting with Three-Digit Numerals

Find each difference.

$$\begin{array}{r} 900 \\ - 200 \\ \hline \end{array}$$

$$\begin{array}{r} 990 \\ - 270 \\ \hline \end{array}$$

$$\begin{array}{r} 999 \\ - 272 \\ \hline \end{array}$$

$$\begin{array}{r} 979 \\ - 272 \\ \hline \end{array}$$

$$\begin{array}{r} 929 \\ - 202 \\ \hline \end{array}$$

$$\begin{array}{r} 978 \\ - 455 \\ \hline \end{array}$$

$$\begin{array}{r} 878 \\ - 355 \\ \hline \end{array}$$

$$\begin{array}{r} 778 \\ - 255 \\ \hline \end{array}$$

$$\begin{array}{r} 678 \\ - 155 \\ \hline \end{array}$$

$$\begin{array}{r} 578 \\ - 55 \\ \hline \end{array}$$

$$\begin{array}{r} 568 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 558 \\ - 35 \\ \hline \end{array}$$

$$\begin{array}{r} 548 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 538 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 528 \\ - 5 \\ \hline \end{array}$$

Discover each subtraction pattern.

Then write the missing numerals.

765, 755, 745, _____, _____, 715.

907, 807, 707, _____, _____, 407.

_____, _____, 74, 62, 50, 38.

_____, _____, 353, 252, 151, 50.

376, 368, 360, _____, _____, _____

195, 183, 171, _____, _____, _____.

108 (one hundred eight)

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. On a trip, Hal's family traveled 396 miles in two days. They traveled 185 miles the first day. How many miles did they travel the next day?

Work space

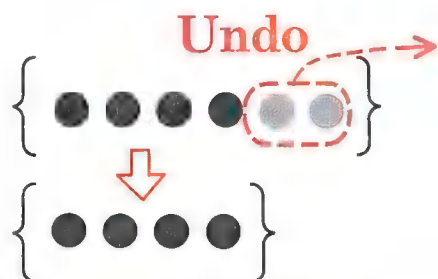
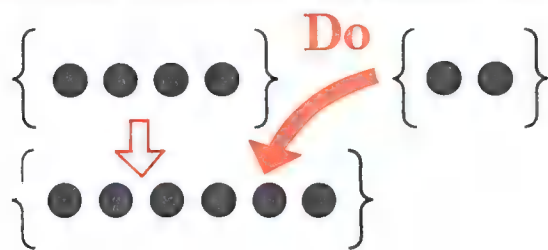
2. Doris made a necklace with 113 beads. If only 68 beads were white, how many were not white?

3. There are 365 days in a year. If 241 days have past, how many days are left?

4. There are 456 pupils in Zale School. If 243 pupils are girls, how many are boys?

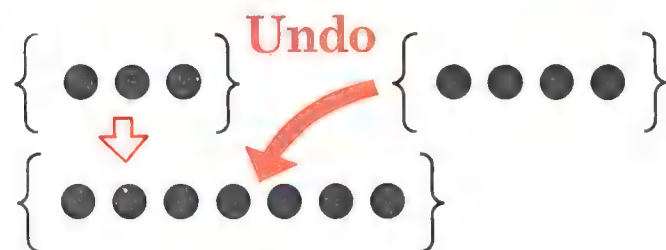
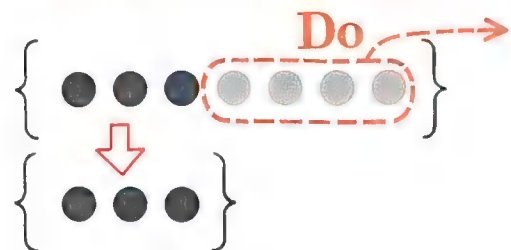
Addition and Subtraction—Do and Undo

Write the correct numeral in each blank.



$$\begin{array}{r} 4 \\ + 2 \\ \hline \end{array} \text{ Do}$$

$$\begin{array}{r} 6 \\ - 2 \\ \hline \end{array} \text{ Undo}$$



$$\begin{array}{r} 7 \\ - 4 \\ \hline \end{array} \text{ Do}$$

$$\begin{array}{r} 3 \\ + 4 \\ \hline \end{array} \text{ Undo}$$

Find each sum or difference.

$$\begin{array}{r} 6 \\ + 3 \\ \hline 9 \end{array} \text{ Do}$$

$$\begin{array}{r} 9 \\ - 3 \\ \hline 6 \end{array} \text{ Undo}$$

$$\begin{array}{r} 36 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ - 23 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ - 23 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 263 \\ + 326 \\ \hline \end{array}$$

$$\begin{array}{r} 263 \\ - 326 \\ \hline \end{array}$$

110 (one hundred ten)

Checking Addition and Subtraction

Add or subtract. Check each addition by subtracting.

Check each subtraction by adding.

$$\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 36 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ - 23 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 75 \\ - 37 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \\ + 37 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ + 80 \\ \hline \end{array}$$

$$\begin{array}{r} 138 \\ - \\ \hline \end{array}$$

$$\begin{array}{r} 478 \\ - 266 \\ \hline \end{array}$$

$$\begin{array}{r} + \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ - 33 \\ \hline \end{array}$$

$$\begin{array}{r} 82 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 130 \\ - 50 \\ \hline \end{array}$$

$$\begin{array}{r} 572 \\ - 341 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ + 60 \\ \hline \end{array}$$

$$\begin{array}{r} 120 \\ + 54 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ + 75 \\ \hline \end{array}$$

$$\begin{array}{r} 254 \\ + 635 \\ \hline \end{array}$$

$$\begin{array}{r} 716 \\ + 272 \\ \hline \end{array}$$

$$\begin{array}{r} 402 \\ + 185 \\ \hline \end{array}$$

$$\begin{array}{r} 489 \\ - 47 \\ \hline \end{array}$$

$$\begin{array}{r} 583 \\ + 405 \\ \hline \end{array}$$

$$\begin{array}{r} 741 \\ - 620 \\ \hline \end{array}$$

$$\begin{array}{r} 427 \\ + 51 \\ \hline \end{array}$$

Adding More Than Three Numbers

The () in each open sentence means “do this first.”

Find each sum.

$$(6 + 5) + 4 + 3 = \underline{\hspace{2cm}}$$

$$3 + 4 + (5 + 6) = \underline{\hspace{2cm}}$$

$$6 + (5 + 4) + 3 = \underline{\hspace{2cm}}$$

$$3 + (4 + 5) + 6 = \underline{\hspace{2cm}}$$

$$6 + 5 + (4 + 3) = \underline{\hspace{2cm}}$$

$$(3 + 4) + 5 + 6 = \underline{\hspace{2cm}}$$

Numbers may be added in any **order**.

Numbers may be **grouped** in any way for addition.

Find each sum.

$$6 + 4 + 5 + 3 = \underline{\hspace{2cm}}$$

$$10 + 9 + 5 + 4 = \underline{\hspace{2cm}}$$

$$3 + 6 + 4 + 6 = \underline{\hspace{2cm}}$$

$$12 + 3 + 4 + 8 = \underline{\hspace{2cm}}$$

$$2 + 7 + 9 + 1 = \underline{\hspace{2cm}}$$

$$7 + 21 + 9 + 3 = \underline{\hspace{2cm}}$$

$$5 + 2 + 5 + 6 = \underline{\hspace{2cm}}$$

$$15 + 5 + 7 + 4 = \underline{\hspace{2cm}}$$

$$3 + 3 + 3 + 3 = \underline{\hspace{2cm}}$$

$$5 + 5 + 5 + 5 = \underline{\hspace{2cm}}$$

Find each sum.

$$\begin{array}{r} 3 \\ 7 \\ 1 \\ 4 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ 8 \\ 10 \\ 14 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 3 \\ 3 \\ 3 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ 2 \\ 23 \\ 4 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ 2 \\ 2 \\ 2 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 12 \\ 14 \\ 16 \\ + 18 \\ \hline \end{array}$$

112 (one hundred twelve)

Checkout Time

Find each sum. Check each addition by subtracting.

$$\begin{array}{r} 80 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ + 47 \\ \hline \end{array}$$

$$\begin{array}{r} 98 \\ + 56 \\ \hline \end{array}$$

$$\begin{array}{r} 520 \\ + 360 \\ \hline \end{array}$$

$$\begin{array}{r} 137 \\ + 561 \\ \hline \end{array}$$

Find each difference. Check each subtraction by adding.

$$\begin{array}{r} 130 \\ - 70 \\ \hline \end{array}$$

$$\begin{array}{r} 110 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 167 \\ - 89 \\ \hline \end{array}$$

$$\begin{array}{r} 842 \\ - 520 \\ \hline \end{array}$$

$$\begin{array}{r} 567 \\ - 435 \\ \hline \end{array}$$

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. For 675 box tops, Dan gets a prize. He has 342 box tops. How many does he need?

Work space

2. Betty had 86 cents. She earned 89 cents more. How many cents did she have?

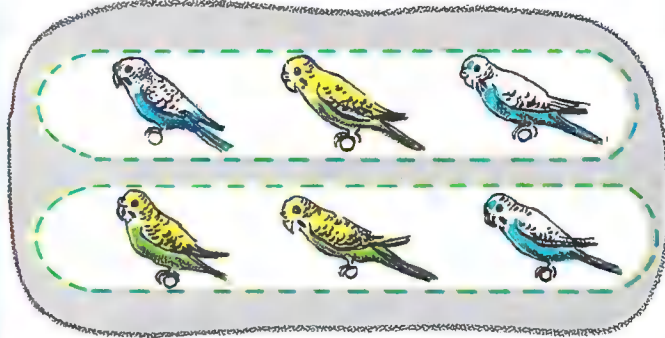
Joining Equivalent Sets

Count the objects in each set.

Then write the correct numeral in each blank.



3 sets of 2 objects make
one set of 6 objects.



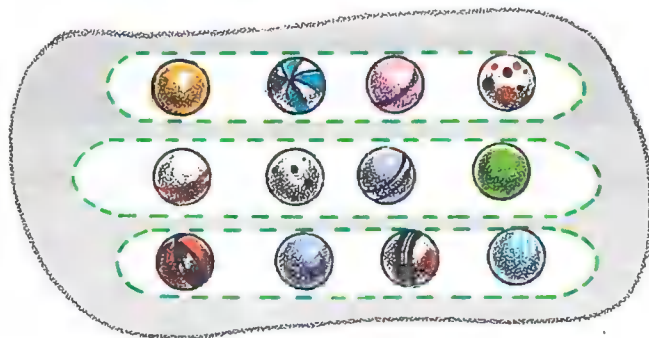
2 sets of 3 objects make
one set of 6 objects.



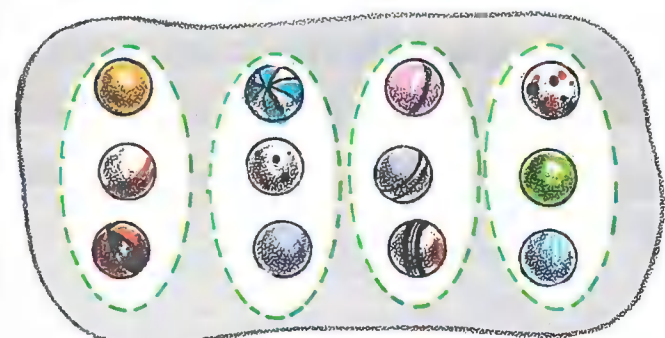
4 sets of 2 objects make
one set of 8 objects.



2 sets of 4 objects make
one set of 8 objects.



3 sets of 4 objects make
one set of 12 objects.



4 sets of 3 objects make
one set of 12 objects.

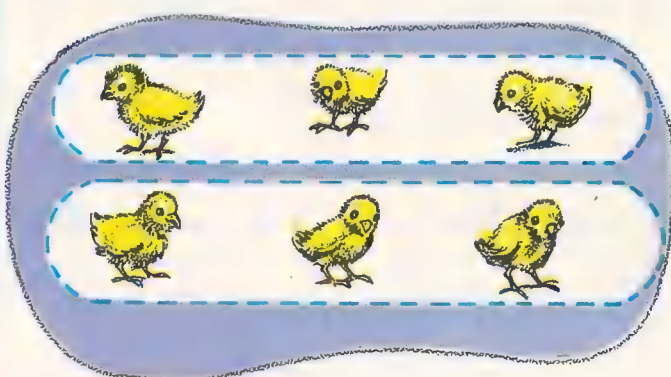
From Joining Equivalent Sets to Repeated Addition

Write the correct numeral in each blank.



$$(\underline{2} + \underline{2}) + \underline{2} =$$

$$\underline{4} + \underline{2} = \underline{6}$$



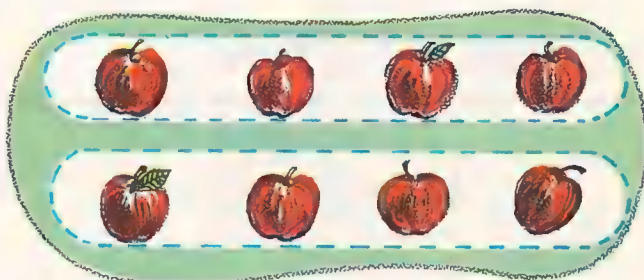
$$\underline{3} + \underline{3} = \underline{6}$$



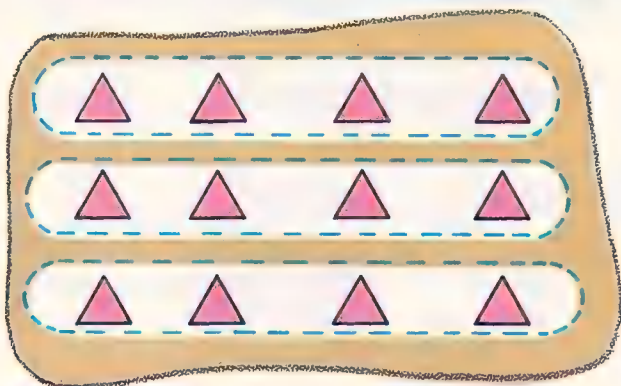
$$(\underline{2} + \underline{2}) + \underline{2} + \underline{2} =$$

$$(\underline{4} + \underline{2}) + \underline{2} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

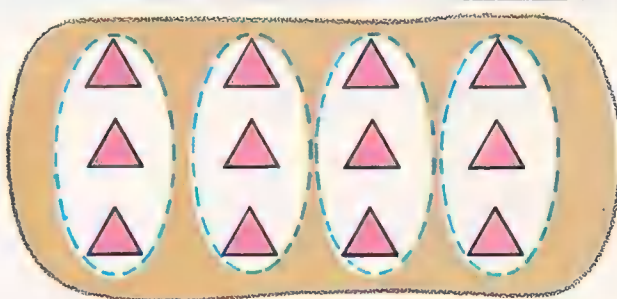


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$(\underline{\quad} + \underline{\quad}) + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$(\underline{\quad} + \underline{\quad}) + \underline{\quad} + \underline{\quad} =$$

$$(\underline{\quad} + \underline{\quad}) + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Repeated Addition

Write the correct numeral in each colored box or blank.

$$2 + 2 + 2 = 6$$

2 has been added 3 times.

3 times 2 equals 6.

$$3 + 3 = 6$$

3 has been added 2 times.

2 times 3 equals 6.

$$2 + 2 + 2 + 2 = 8$$

2 has been added times.

 times equals .

$$4 + 4 =$$

 has been added times.

 times equals .

$$4 + 4 + 4 =$$

 has been added times.

 times equals .

$$3 + 3 + 3 + 3 =$$

 has been added times.

 times equals .

$$2 + 2 + 2 + 2 + 2 =$$

 has been added times.

 times equals .

$$5 + 5 =$$

 has been added times.

 times equals .

$$3 + 3 + 3 + 3 + 3 =$$

 has been added times.

 times equals .

$$5 + 5 + 5 =$$

 has been added times.

 times equals .

From Repeated Addition to Multiplication

Write the correct numeral in each colored box or blank.

Because $2 + 2 + 2 + 2 + 2 =$ 10, we say

5 times 2 equals 10.

This shortened way of thinking about repeated addition is called **multiplication**.

We say that 2 multiplied by 5 equals 10, and

we write $\underline{5} \times \underline{2} = \underline{10}$.

We say that 10 is the **product** of 5 and 2.

Write the correct numeral in each colored box or blank.

$$2 + 2 + 2 + 2 =$$
 8

$$\underline{4} \times \underline{2} = \underline{8}$$

The product of 4 and 2 is 8.

$$4 + 4 =$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

The product of 2 and 4 is .

$$5 + 5 + 5 =$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

The product of 3 and 5 is .

$$3 + 3 + 3 + 3 + 3 =$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

The product of 5 and 3 is .

Using Two in Multiplication

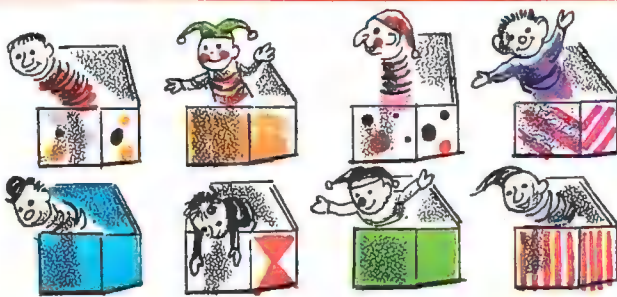
Use the pictures to help you think about each multiplication. Then write the correct numeral in each blank.



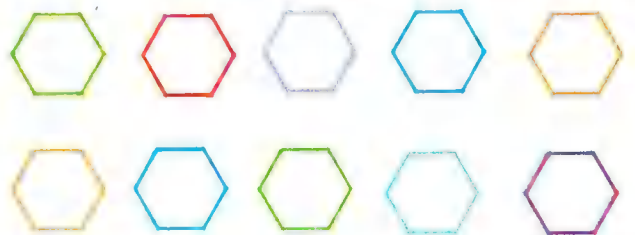
$$2 \times 2 = \underline{4}$$



$$2 \times 3 = 3 \times \underline{2} = \underline{6}$$



$$2 \times 4 = 4 \times \underline{2} = \underline{\quad}$$



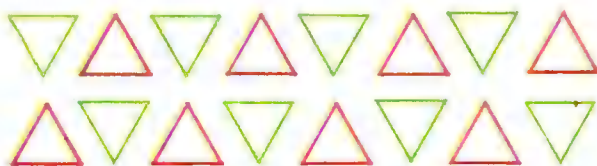
$$2 \times 5 = \underline{\quad} \times 2 = \underline{\quad}$$



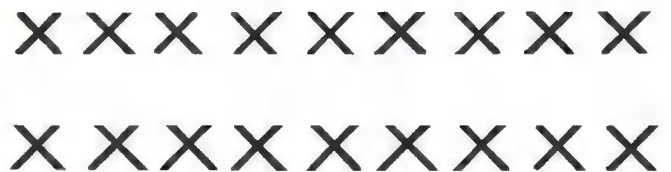
$$2 \times 6 = \underline{\quad} \times 2 = \underline{\quad}$$



$$2 \times 7 = 7 \times \underline{\quad} = \underline{\quad}$$



$$2 \times 8 = 8 \times \underline{\quad} = \underline{\quad}$$



$$2 \times 9 = \underline{\quad} \times 2 = \underline{\quad}$$

Using Three in Multiplication

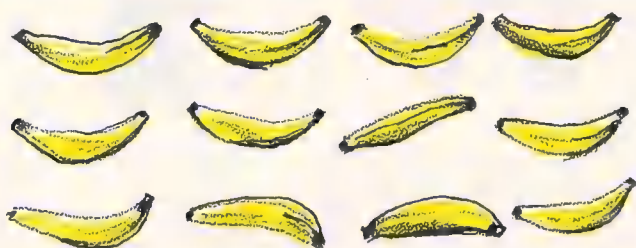
Use the pictures to help you think about each multiplication. Then write the correct numeral in each blank.



$$3 \times 2 = 2 \times 3 = 6$$



$$3 \times 3 = 9$$



$$3 \times 4 = \underline{\quad} \times 3 = \underline{\quad}$$



$$3 \times 5 = 5 \times \underline{\quad} = \underline{\quad}$$



$$3 \times 6 = 6 \times \underline{\quad} = \underline{\quad}$$



$$3 \times 7 = \underline{\quad} \times 3 = \underline{\quad}$$



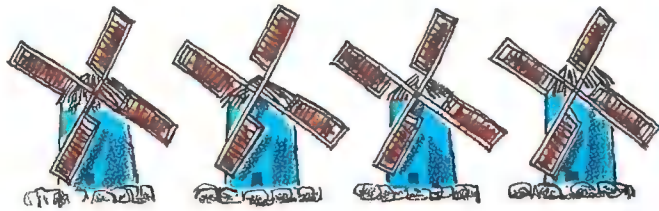
$$3 \times 8 = \underline{\quad} \times 3 = \underline{\quad}$$



$$3 \times 9 = 9 \times \underline{\quad} = \underline{\quad}$$

Using One in Multiplication

Use the pictures to help you think about each multiplication. Then write the correct numeral in each blank.



$$1 \times 4 = 4 \times \underline{1} = \underline{4}$$



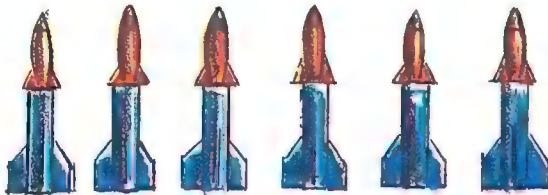
$$1 \times 5 = \underline{5} \times 1 = \underline{5}$$



$$1 \times 3 = \underline{\quad} \times 1 = \underline{\quad}$$



$$1 \times 2 = 2 \times \underline{\quad} = \underline{\quad}$$



$$1 \times 6 = 6 \times \underline{\quad} = \underline{\quad}$$



$$1 \times 7 = \underline{\quad} \times 1 = \underline{\quad}$$



$$1 \times 1 = \underline{\quad}$$



$$1 \times 8 = 8 \times \underline{\quad} = \underline{\quad}$$

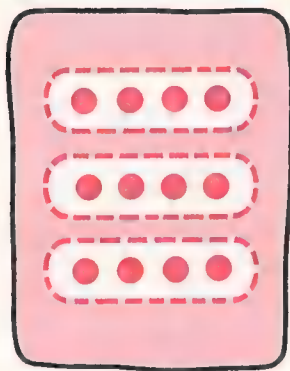


$$1 \times 9 = \underline{\quad} \times 1 = \underline{\quad}$$

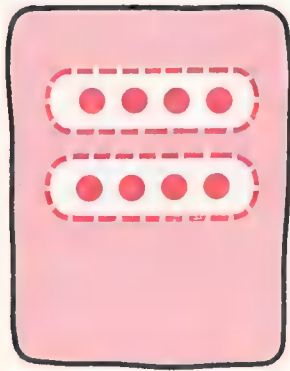
One times any given number is equal to the given number.

Using Zero in Multiplication

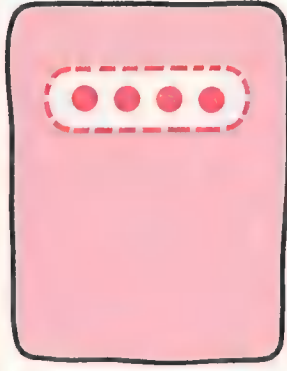
Study the set pictures to discover the product of 0 and 4.
Then write the correct numeral in each blank.



$$3 \times 4 = \underline{12}$$



$$2 \times 4 = \underline{8}$$



$$1 \times 4 = \underline{4}$$



$$0 \times 4 = \underline{0}$$

Study the additions to discover the product of 0 and 5.
Then write the correct numeral in each blank.

$$3 \times 5 = 5 \times 3 = 3 + 3 + 3 + 3 + 3 = \underline{15}$$

$$2 \times 5 = 5 \times 2 = 2 + 2 + 2 + 2 + 2 = \underline{10}$$

$$1 \times 5 = 5 \times 1 = 1 + 1 + 1 + 1 + 1 = \underline{5}$$

$$0 \times 5 = 5 \times 0 = 0 + 0 + 0 + 0 + 0 = \underline{0}$$

Write the correct numeral in each blank.

$$0 \times 8 = 8 \times 0 = 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 = \underline{0}$$

$$0 \times 6 = 6 \times 0 = 0 + 0 + 0 + 0 + 0 + 0 = \underline{\quad}$$

$$0 \times 7 = 7 \times 0 = \underline{\quad}$$

$$0 \times 9 = 9 \times 0 = \underline{\quad}$$

$$0 \times 3 = 3 \times 0 = \underline{\quad}$$

$$0 \times 2 = 2 \times 0 = \underline{\quad}$$

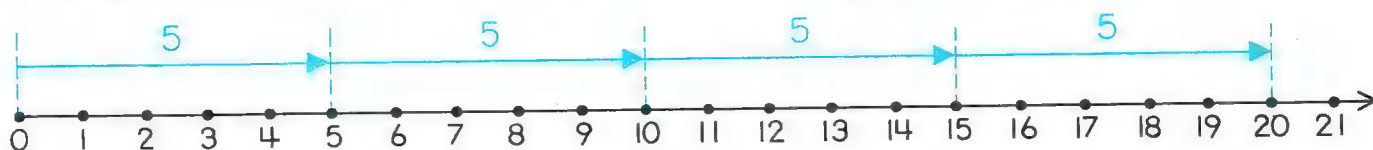
$$0 \times 1 = 1 \times 0 = \underline{\quad}$$

$$0 \times 0 = \underline{\quad}$$

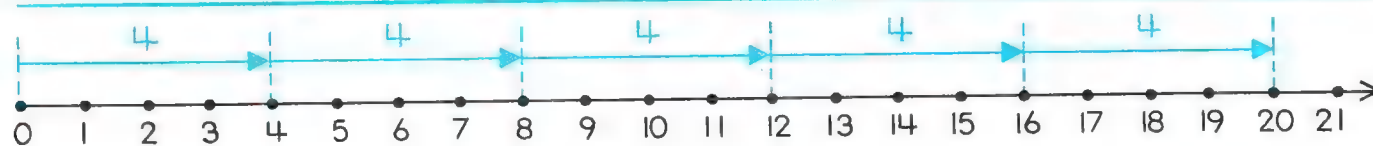
Zero times any given number is equal to zero.

Using Four and Five in Multiplication

Study the number line. Then find the product.



$$4 \times 5 = 5 + 5 + 5 + 5 = \underline{\hspace{2cm}}$$



$$5 \times 4 = 4 + 4 + 4 + 4 + 4 = \underline{\hspace{2cm}}$$

$$4 \times 5 = 5 \times 4 = 20$$

Find each product.

Make number lines of your own to help you if necessary.

$$4 \times 0 = 0 \times 4 = \underline{0}$$

$$5 \times 0 = 0 \times 5 = \underline{0}$$

$$4 \times 1 = 1 \times 4 = \underline{4}$$

$$5 \times 1 = 1 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 2 = 2 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 2 = 2 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 3 = 3 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 3 = 3 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 4 = 4 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 5 = 5 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 6 = 6 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 6 = 6 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 7 = 7 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 7 = 7 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 8 = 8 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 8 = 8 \times 5 = \underline{\hspace{2cm}}$$

$$4 \times 9 = 9 \times 4 = \underline{\hspace{2cm}}$$

$$5 \times 9 = 9 \times 5 = \underline{\hspace{2cm}}$$

A Table of Basic Multiplication Facts

Write the correct numerals to complete each row.

Start with zero.

Count by ones.

} →

0	1	2	3		
---	---	---	---	--	--

Start with zero.

Count by twos.

} →

0	2	4	6		
---	---	---	---	--	--

Start with zero.

Count by threes.

} →

0	3				
---	---	--	--	--	--

Start with zero.

Count by fours.

} →

0	4				
---	---	--	--	--	--

Start with zero.

Count by fives.

} →

--	--	--	--	--	--

Complete the multiplication table below.

Use the counting patterns you have shown above to help you.

X	0	1	2	3	4	5
0	0	0	0	0	0	
1	0	1	2	3		
2	0	2	4			
3	0					
4	0					
5						

Using Six and Seven in Multiplication

Find each product.

$$6 \times 7 = 7 + 7 + 7 + 7 + 7 + 7 = \boxed{42}$$

$$7 \times 6 = 6 + 6 + 6 + 6 + 6 + 6 + 6 = \boxed{42}$$

$$6 \times 7 = 7 \times 6 = 42$$

$$6 \times 0 = 0 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 0 = 0 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 1 = 1 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 1 = 1 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 2 = 2 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 2 = 2 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 3 = 3 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 3 = 3 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 4 = 4 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 4 = 4 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 5 = 5 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 5 = 5 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 6 = 6 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 7 = 7 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 8 = 8 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 8 = 8 \times 7 = \underline{\hspace{2cm}}$$

$$6 \times 9 = 9 \times 6 = \underline{\hspace{2cm}}$$

$$7 \times 9 = 9 \times 7 = \underline{\hspace{2cm}}$$

Using Eight and Nine in Multiplication

Find each product.

$$8 \times 9 = 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 = \boxed{72}$$

$$9 \times 8 = 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = \boxed{72}$$

$$8 \times 9 = 9 \times 8 = 72$$

$$8 \times 0 = 0 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 0 = 0 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 1 = 1 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 1 = 1 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 2 = 2 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 2 = 2 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 3 = 3 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 3 = 3 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 4 = 4 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 4 = 4 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 5 = 5 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 5 = 5 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 6 = 6 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 6 = 6 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 7 = 7 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 7 = 7 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 8 = 8 \times 9 = \underline{\hspace{2cm}}$$

$$8 \times 9 = 9 \times 8 = \underline{\hspace{2cm}}$$

$$9 \times 9 = \underline{\hspace{2cm}}$$

The Basic Multiplication Facts

Write the correct numerals to complete each row.

Start with zero and count by sixes.

0	6	12	18	24					
---	---	----	----	----	--	--	--	--	--

Start with zero and count by sevens.

0	7	14	21						
---	---	----	----	--	--	--	--	--	--

Start with zero and count by eights.

0	8	16							
---	---	----	--	--	--	--	--	--	--

Complete the multiplication table below.

X	0	1	2	3	4	5	6	7	8	9
0	0						0			
1		1								
2										
3										
4										
5										
6										
7									56	
8							48			
9	0									81

126 (one hundred twenty-six)

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. Scott saves 5 cents every day. How many cents will he save in 7 days?

Work space

$$\begin{array}{r} 7 \times 5 = \square \\ 35 \text{ cents} \end{array}$$

2. Claire has 4 dolls. She has 3 doll dresses for each doll. How many doll dresses does Claire have?

$$\begin{array}{r} \\ \end{array}$$

3. Clay saw 4 wagons in a store window. Each wagon had 4 wheels. How many wheels were there on the wagons?

$$\begin{array}{r} \\ \end{array}$$


4. How many wheels are on 9 bicycles?
(Hint: What does bicycle mean?)

$$\begin{array}{r} \\ \end{array}$$

Using the Correct Symbol in a Number Sentence

Write the correct symbol in each  or .

Use the symbol +, −, or ×.

$6 \text{  4 = 10$

$6 \text{  4 = 2$

$6 \text{  4 = 24$

$9 \text{  2 = 18$

$21 \text{  9 = 30$

$23 \text{  9 = 14$

Use the symbol < or >.

$8 + 4 \text{  10$

$8 - 4 \text{  10$

$8 \times 4 \text{  10$

$47 - 35 \text{  80$

$35 + 17 \text{  50$

$7 \times 7 \text{  50$

Use the symbol +, −, or ×.

$6 \text{  6 = 12$

$6 \text{  6 < 12$

$6 \text{  6 > 12$

$8 \text{  8 < 16$

$8 \text{  8 = 16$

$8 \text{  8 > 16$

Use the symbol =, <, or >.

$9 \times 9 \text{  50$

$75 + 19 \text{  100$

$5 \times 5 \text{  25$

$9 + 0 \text{  9$

$9 + 1 \text{  9$

$9 \times 1 \text{  9$

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. Ross spent 35 cents for a writing tablet and 47 cents for a toy truck. How many cents did he spend?

Work space

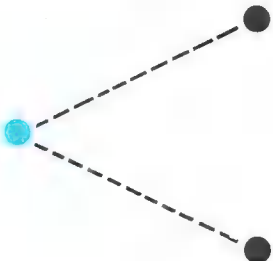
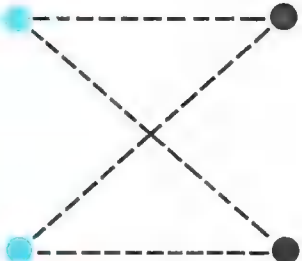



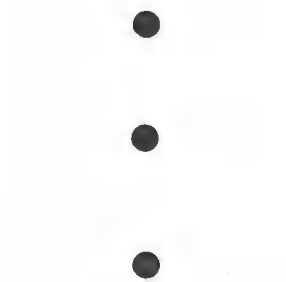
2. Mrs. Harbeck baked 24 cupcakes for Claire's party. If 19 cupcakes were eaten, how many were left?

3. Blake has 5 puppies. He feeds each puppy 3 dog biscuits each day. How many dog biscuits does he use each day?

4. How many wheels are on 8 tricycles? (Hint: What does tricycle mean?)

Patterns

In each problem, draw a line segment from each • to each •. Then complete the table below.

1.		2.		3.	
4.		5.		6.	

Problem	Number of			Multiplication sentence
	•'s	•'s	Line segments	
1.	1	2	2	$1 \times 2 = 2$
2.	2	2	4	$2 \times 2 = 4$
3.				
4.				
5.				
6.				

Number Patterns

Study each pattern. Write the missing numerals.

$$0, 2, 4, 6, 8, 10, \underline{12}, \underline{14}, \underline{16}$$

(Arrows indicate +2 between consecutive numbers)

$$29, 26, 23, 20, 17, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

(Arrows indicate -3 between consecutive numbers)

$$3, 5, 4, 6, 5, 7, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

(Arrows indicate +2, -1, +2, -1, +2, -1 between consecutive numbers)

Discover the pattern. Write the missing numerals.

$$0, 3, 6, 9, 12, 15, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$70, 65, 60, 55, 50, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$84, 82, 80, 78, 76, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$0, 4, 8, 12, 16, 20, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$15, 20, 25, 30, 35, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$13, 12, 14, 13, 15, 14, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

$$10, 13, 12, 15, 14, 17, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

Number Patterns

Study each pattern. Write the missing numerals.
Then find each sum.

$$1 + 3 + 5 + 7 + 9 + 11 + 13 = 49$$

$$14 + 12 + 10 + 8 + 6 + 4 + 2 = \boxed{}$$

$$12 + 10 + 11 + 9 + 10 + + = \boxed{}$$

Discover the pattern. Write the missing numerals.
Then find each sum.

$$1 + 2 + 3 + 4 + + + = \boxed{}$$

$$2 + 4 + 6 + 8 + + + = \boxed{}$$

$$1 + 4 + 7 + 10 + + + = \boxed{}$$

$$2 + 5 + 8 + 11 + + + = \boxed{}$$

$$21 + 18 + 15 + 12 + + + = \boxed{}$$

$$26 + 22 + 18 + 14 + + + = \boxed{}$$

$$3 + 5 + 4 + 6 + + + = \boxed{}$$

132 (one hundred thirty-two)

Checkup Time

Write the correct numeral in each blank.

$4 \times 3 = \underline{\quad} \times 4$

$3 \times 4 = \underline{\quad}$

$2 \times 5 = 5 \times \underline{\quad}$

$5 \times 2 = \underline{\quad}$

$4 + 4 + 4 + 4 = \underline{\quad} \times 4$

$6 \times 6 = \underline{\quad}$

$3 \times 5 = \underline{\quad} \times 3$

$5 \times 7 = \underline{\quad}$

$8 \times 6 = 6 \times \underline{\quad}$

$7 \times 9 = \underline{\quad}$

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. How many people are there in 8 empty rooms?

Work space

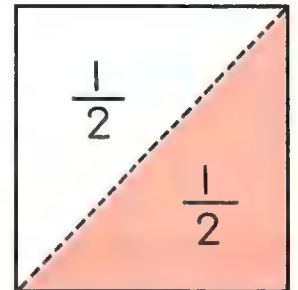
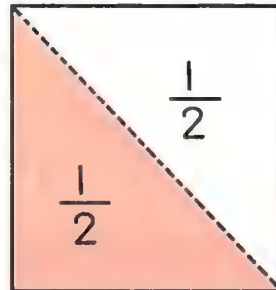
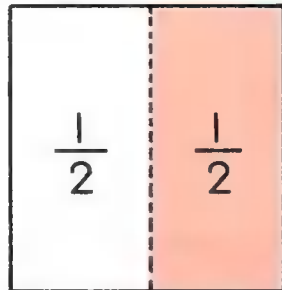
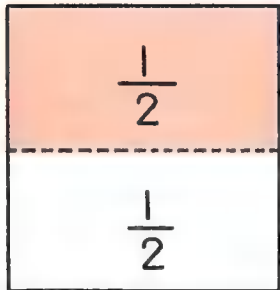
2. A kind of truck has 6 wheels. How many wheels are on 5 trucks of this kind?

One Half

Each square figure below is separated into ____ parts.

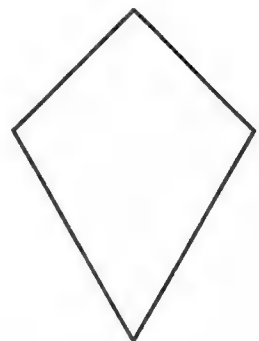
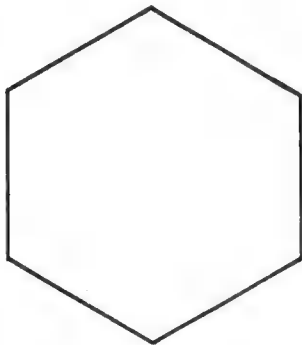
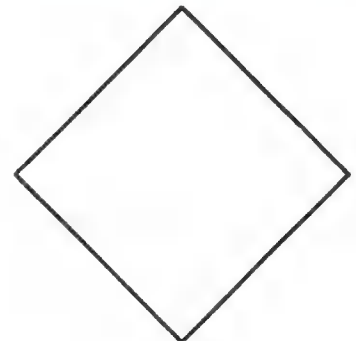
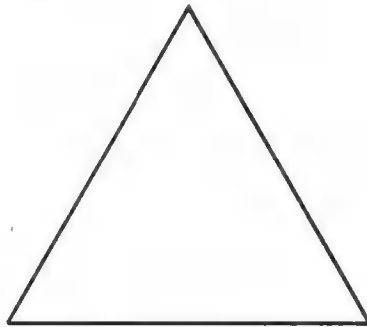
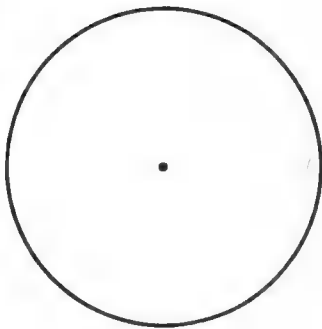
The parts of each square figure are the same size.

Each part is called **one half** of the square figure.



Number of parts colored $\longrightarrow \frac{1}{2}$ is a name for one half.
Number of parts in all $\longrightarrow 2$

Color one half of each figure.




Use a different way to separate each figure into halves.



One Half of a Number

Separate the set into two sets having the same number.

6 stars



3 stars 3 stars

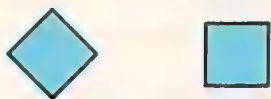
$\frac{1}{2}$ of 6 stars $\frac{1}{2}$ of 6 stars

One half of six is three.

$\frac{1}{2}$ of 6 = 3

Draw a ring around $\frac{1}{2}$ of the objects in each set.

Then complete each sentence.



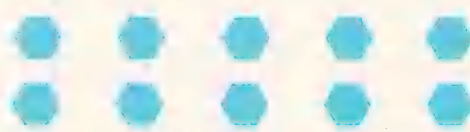
$$\frac{1}{2} \text{ of } 2 = \underline{\quad}$$



$$\frac{1}{2} \text{ of } 4 = \underline{\quad}$$



$$\frac{1}{2} \text{ of } \underline{8} = \underline{\quad}$$



$$\frac{1}{2} \text{ of } \underline{10} = \underline{\quad}$$



$$\frac{1}{2} \text{ of } \underline{\quad} = \underline{\quad}$$



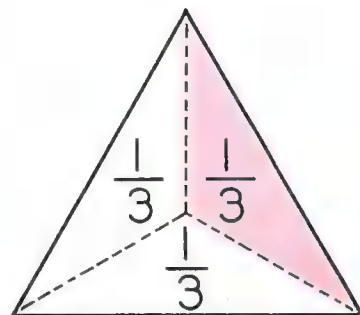
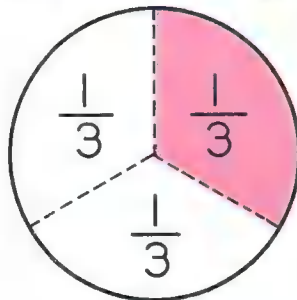
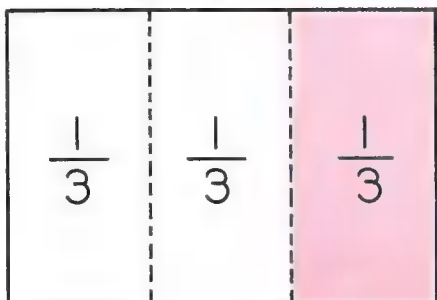
$$\frac{1}{2} \text{ of } \underline{\quad} = \underline{\quad}$$

One Third

Each figure below is separated into ____ parts.

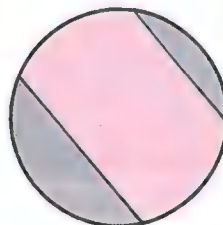
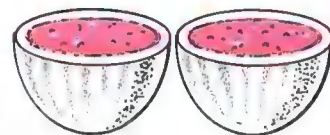
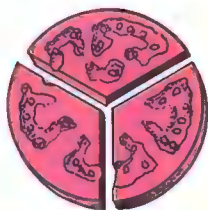
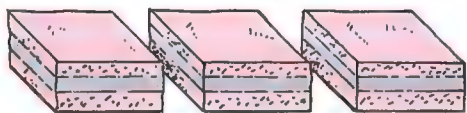
The parts of each figure are the same size.

Each part is called **one third** of the figure.



Number of parts colored $\longrightarrow \frac{1}{3}$ is a name for one third.
 Number of parts in all $\longrightarrow 3$

Draw a ring around each picture which shows thirds.

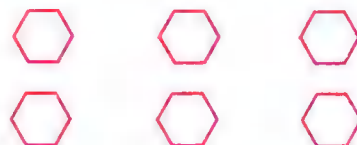


Draw a ring around $\frac{1}{3}$ of the objects in each set.

Then complete each sentence.



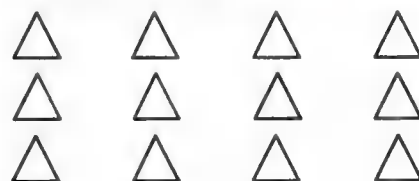
$$\frac{1}{3} \text{ of } 3 = \underline{\quad}$$



$$\frac{1}{3} \text{ of } 6 = \underline{\quad}$$



$$\frac{1}{3} \text{ of } \underline{\quad} = \underline{\quad}$$



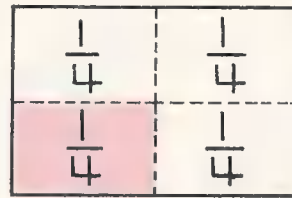
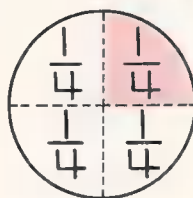
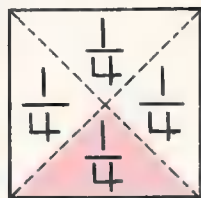
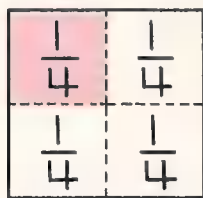
$$\frac{1}{3} \text{ of } \underline{\quad} = \underline{\quad}$$

One Fourth

Each figure below is separated into ____ parts.

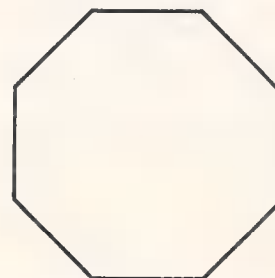
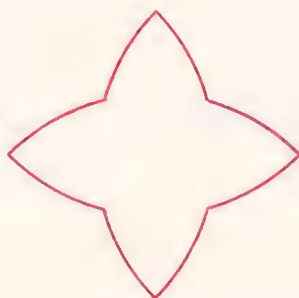
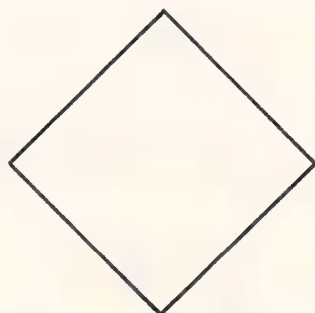
The parts of each figure are the same size.

Each part is called **one fourth** of the figure.



Number of parts colored $\longrightarrow \frac{1}{4}$ is a name for one fourth.
 Number of parts in all $\longrightarrow 4$

Draw line segments to separate each figure into fourths.

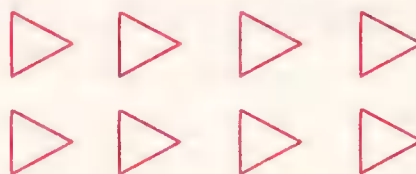


Draw a ring around $\frac{1}{4}$ of the objects in each set.

Then complete each sentence.



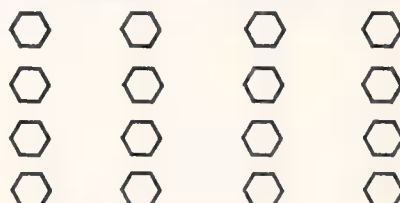
$\frac{1}{4}$ of 4 = ____



$\frac{1}{4}$ of 8 = ____



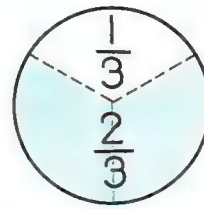
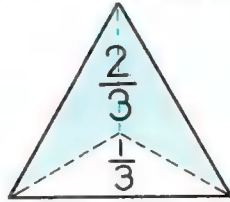
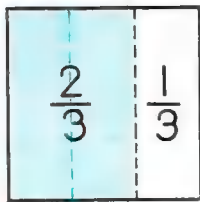
$\frac{1}{4}$ of ____ = ____



$\frac{1}{4}$ of ____ = ____

Two Thirds

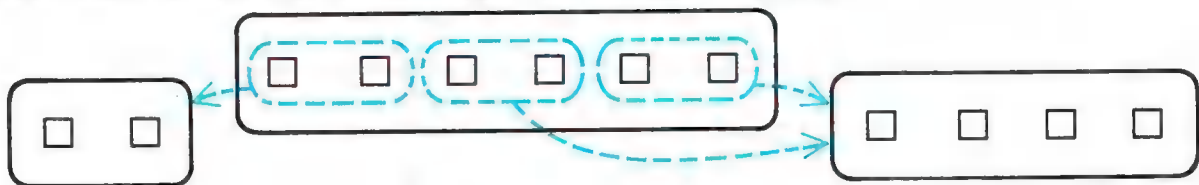
Two thirds of each figure is colored.



Number of parts colored in each figure $\longrightarrow \frac{2}{3}$
 Number of parts of the same size $\longrightarrow 3$

Separate the set to show two thirds of the objects.

Write the correct numeral in each blank.



$\frac{1}{3}$ of 6 squares

6 squares

$\frac{2}{3}$ of 6 squares

$\frac{1}{3}$ of 6 = ____

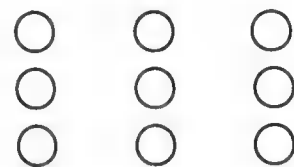
$\frac{2}{3}$ of 6 = ____

Draw a ring around $\frac{2}{3}$ of the objects in each set.

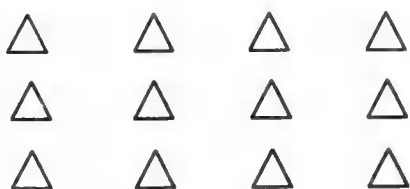
Then complete each sentence.



$\frac{2}{3}$ of 3 = ____



$\frac{2}{3}$ of 9 = ____



$\frac{2}{3}$ of ____ = ____

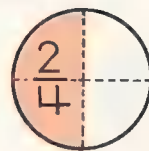
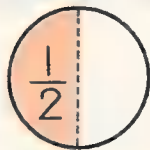


$\frac{2}{3}$ of ____ = ____

Two Fourths

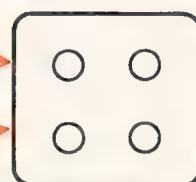
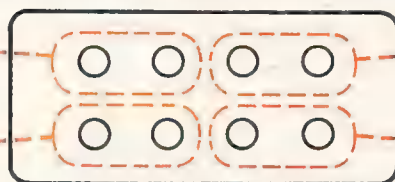
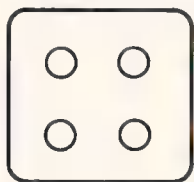
One half of the first figure is colored.

Two fourths of the second figure is colored.



1 ← Number of parts colored in each figure → 2
 $\frac{1}{2}$ ← Number of parts of the same size → $\frac{2}{4}$

Study the sets. Write the correct numeral in each blank.



_____ circles
 $\frac{2}{4}$ of 8 circles
 $\frac{1}{2}$ of 8 circles

$$\frac{1}{2} = \frac{2}{4}$$

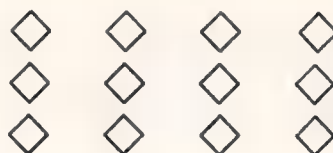
_____ circles
 $\frac{2}{4}$ of 8 = _____
 $\frac{1}{2}$ of 8 = _____

Draw a ring around $\frac{2}{4}$ of the objects in each set.

Then complete each sentence.



$\frac{2}{4}$ of _____ = _____



$\frac{2}{4}$ of _____ = _____

Draw a ring around $\frac{1}{2}$ of the objects in each set.

Then complete each sentence.



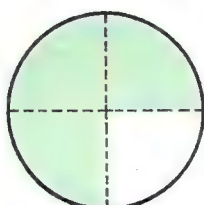
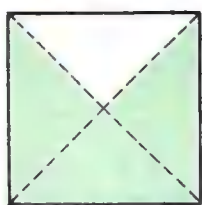
$\frac{1}{2}$ of _____ = _____



$\frac{1}{2}$ of _____ = _____

Three Fourths

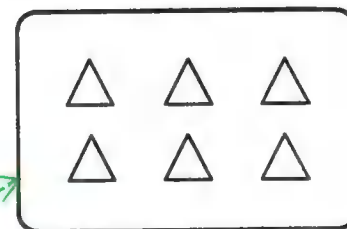
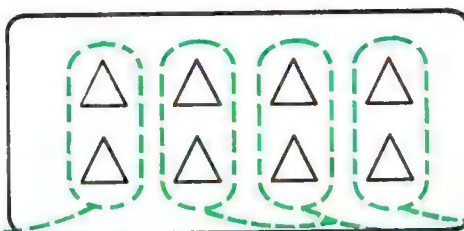
Three fourths of each figure is colored.



Number of parts colored in each figure $\longrightarrow \frac{3}{4}$

Number of parts of the same size $\longrightarrow \frac{3}{4}$

Study the sets. Write the correct numeral in each blank.



$\frac{1}{4}$ of 8 triangles

8 triangles

$\frac{3}{4}$ of 8 triangles

$\frac{1}{4}$ of 8 =

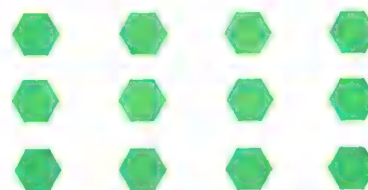
$\frac{3}{4}$ of 8 =

Draw a ring around $\frac{3}{4}$ of the objects in each set.

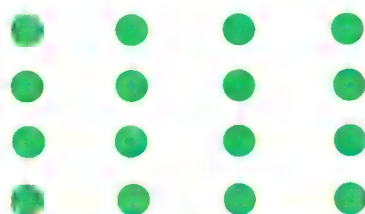
Then complete each sentence.



$\frac{3}{4}$ of 4 =



$\frac{3}{4}$ of 12 =



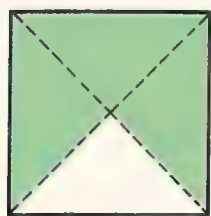
$\frac{3}{4}$ of =



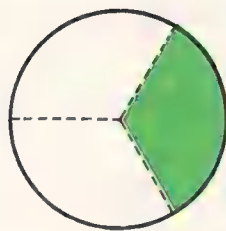
$\frac{3}{4}$ of =

Naming Fractional Parts

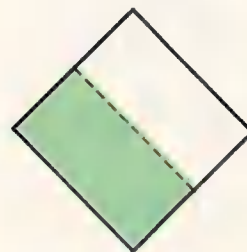
Write a fraction to name the colored part of each figure.



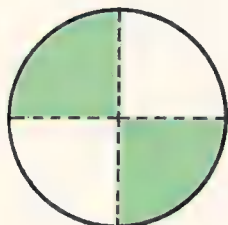
$\frac{3}{4}$



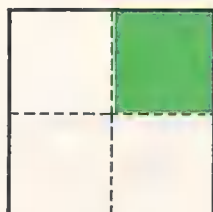
—



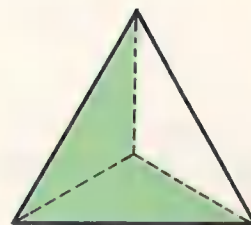
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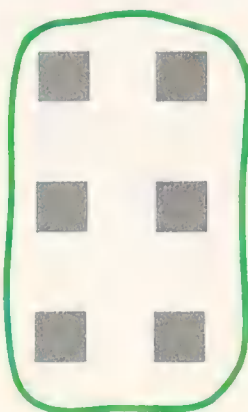


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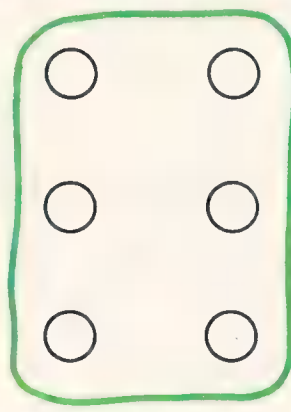
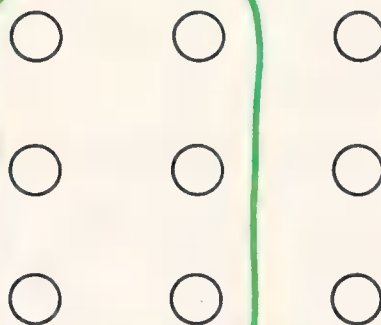


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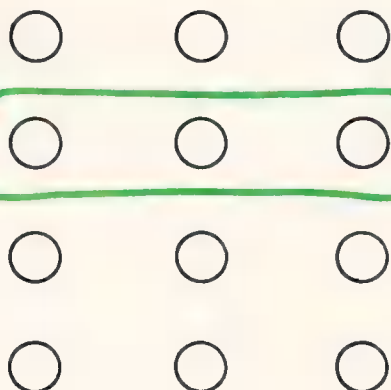
A ring is drawn around some of the objects in each set.
Write a fraction for those objects inside the ring.



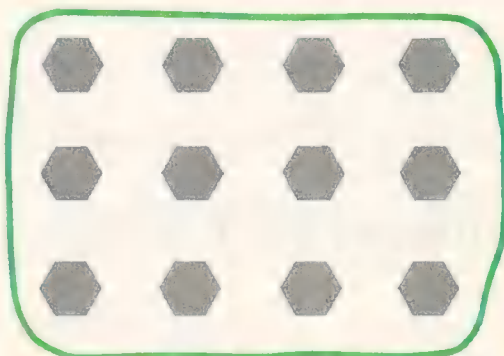
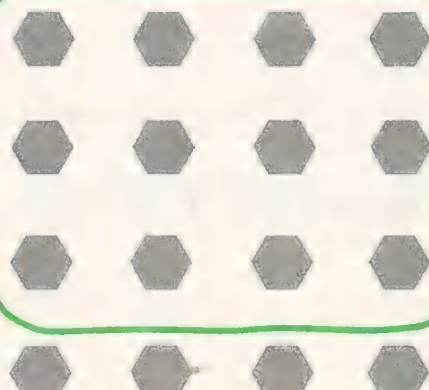
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Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. James had 10 dimes. He spent $\frac{1}{2}$ of them.

Work space

How many of the dimes were left?

_____ of _____ = _____

2. Pam looked at 12 books. She had already read $\frac{2}{3}$ of the books. How many of the books had she already read?

_____ of _____ = _____

3. A cake was cut into 8 pieces of the same size. Then $\frac{1}{4}$ of the cake was eaten. How many pieces were eaten?

_____ of _____ = _____

4. Tom saw 9 frogs on a log. Then $\frac{1}{3}$ of them jumped away. How many jumped away?

_____ of _____ = _____

Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. Mary picked 6 roses and 4 lilies. She put $\frac{1}{2}$ of the roses and all the lilies in a vase. How many flowers were in the vase?

$$\left(\frac{1}{2} \text{ of } 6\right) + 4 = \boxed{}$$

7 flowers

Work space

2. John had 8 balloons. He gave $\frac{1}{4}$ of them away. How many balloons did he keep?

$$8 - \left(\frac{1}{4} \text{ of } 8\right) = \boxed{}$$

3. Mark had 12 baseball cards. He traded $\frac{1}{3}$ of them. How many did he not trade?

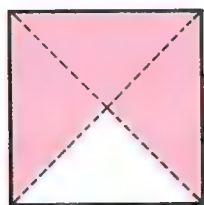
$$\underline{\hspace{2cm}} \left(\underline{\hspace{1cm}} \text{ of } \underline{\hspace{1cm}}\right) = \underline{\hspace{2cm}}$$

4. There are 12 girls and 20 boys in a class. All the boys and $\frac{2}{3}$ of the girls were present. How many children were present?

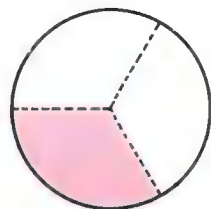
$$\left(\underline{\hspace{1cm}} \text{ of } \underline{\hspace{1cm}}\right) + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

Checkup Time

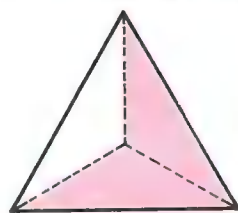
Ring the fraction that names the colored part of each figure.



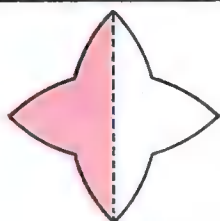
$\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$



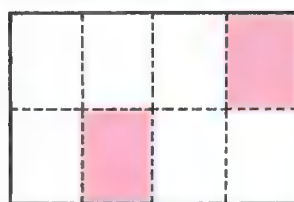
$\frac{1}{3}$ $\frac{1}{2}$ $\frac{2}{3}$



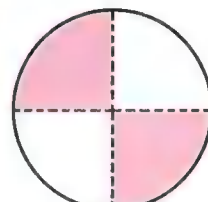
$\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{4}$



$\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



$\frac{2}{3}$ $\frac{2}{4}$ $\frac{1}{4}$

Use the correct set of objects to solve each open sentence.



$$\frac{1}{4} \text{ of } 8 = \underline{\hspace{2cm}}$$



$$\frac{1}{2} \text{ of } 12 = \underline{\hspace{2cm}}$$



$$\frac{3}{4} \text{ of } 16 = \underline{\hspace{2cm}}$$



$$\frac{1}{3} \text{ of } 15 = \underline{\hspace{2cm}}$$

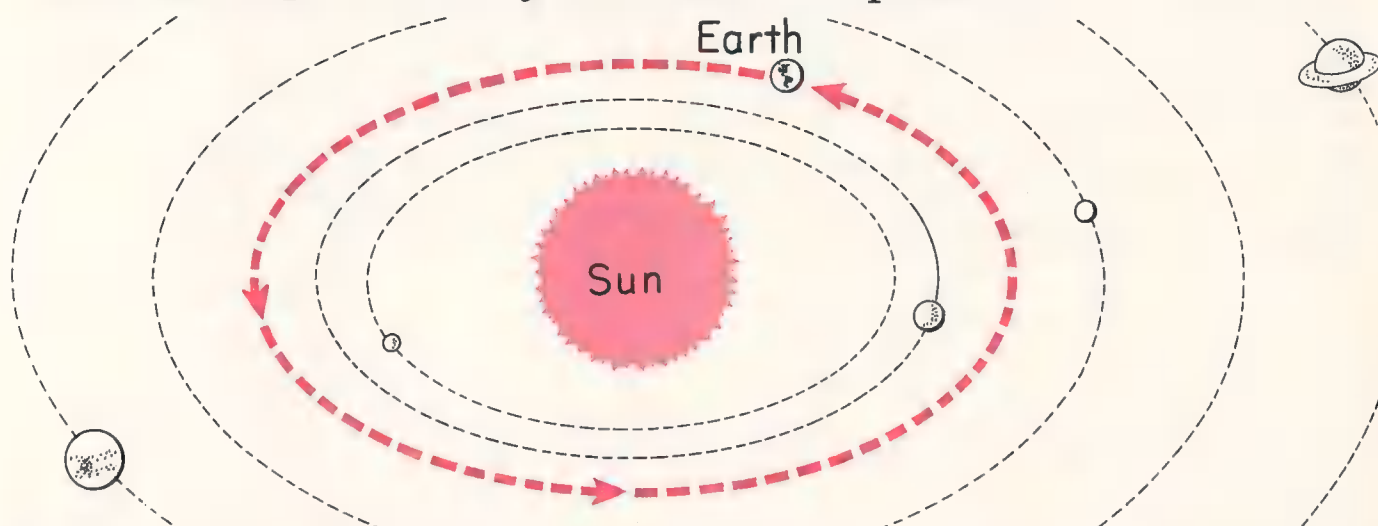


$$\frac{2}{3} \text{ of } 18 = \underline{\hspace{2cm}}$$

144 (one hundred forty-four)

Units of Time

Study each picture as your teacher explains it.



It takes a **year** for the earth to move around the sun.



It takes a **day** for the earth to spin around once.

From noon today till noon tomorrow is 1 **day**.

A day is separated into 24 smaller periods of time.

Each of these smaller time periods is called 1 **hour**.

An hour is separated into 60 smaller periods of time.

Each of these smaller time periods is called 1 **minute**.

1 year is equivalent to about 365 days.

1 day is equivalent to 24 hours.

1 hour is equivalent to 60 minutes.

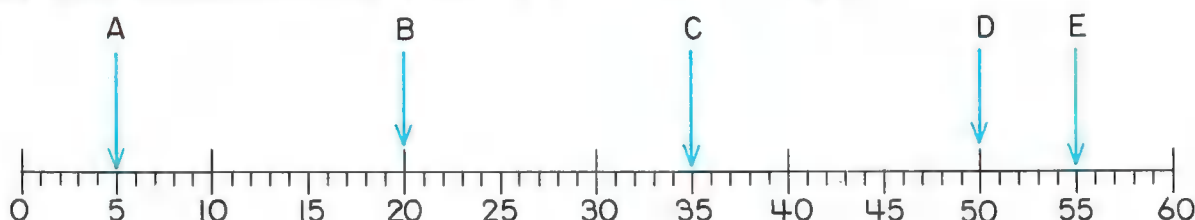
Showing Minutes on a Number Line

Count by fives and write the correct numeral in each blank.

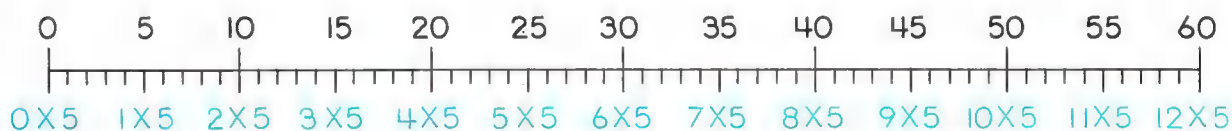
0, 5, 10, _____, _____, 25, 30, _____, _____, _____, 50, _____, _____

These numbers are shown on the number line below.

Read the numeral to which each arrow points.



Using multiplication, we can rename each of these numbers.



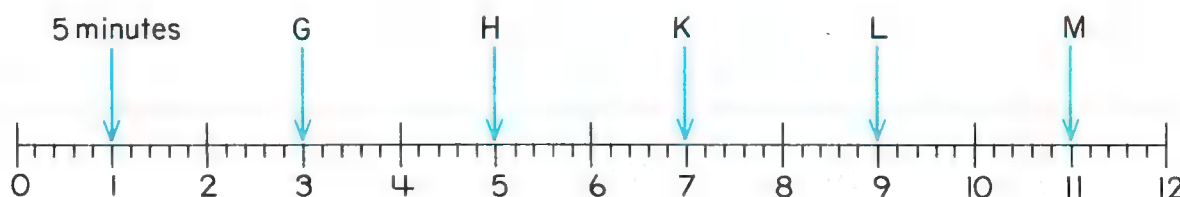
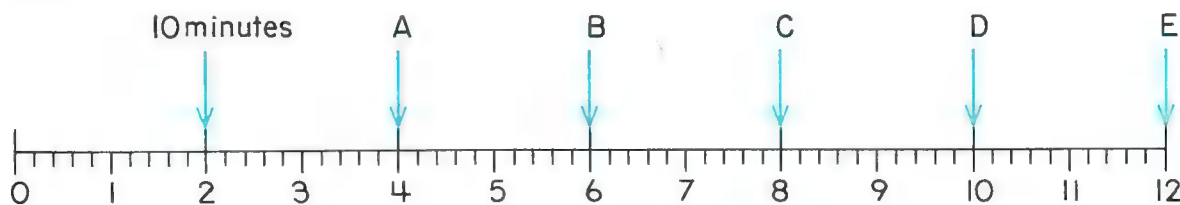
Let each space on the number line represent 1 minute.

Then the 60 spaces represent 60 minutes or 1 hour.

Let us use 0 for 0×5 , 1 for 1×5 , 2 for 2×5 , and so on.



Tell the number of minutes shown by each arrow.

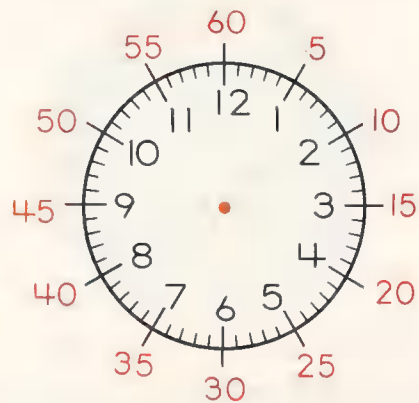
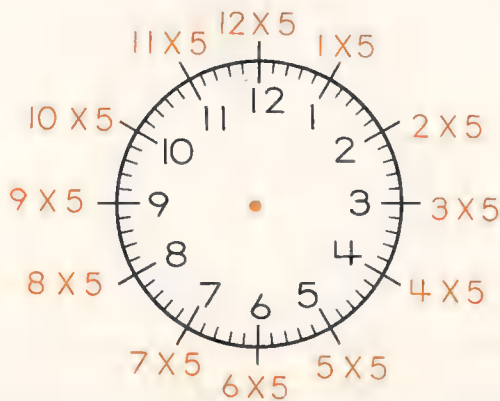


Minutes on a Clockface

Now roll the number line to form a circle.

0 and 12 mark the same point on the circle.

Study the meaning of each numeral on the clockfaces below.



Each arrow below represents the minute hand of a clock.
Write the numeral for the number of minutes shown.



_____ minutes

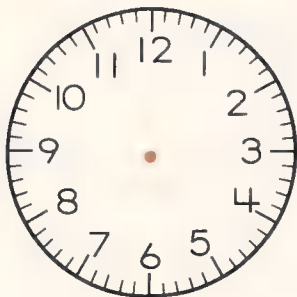


_____ minutes

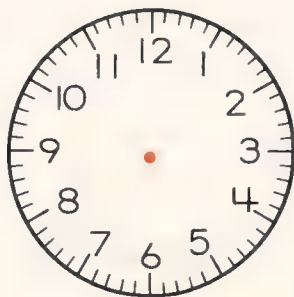


_____ minutes

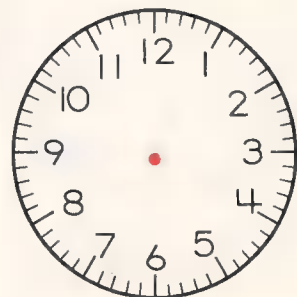
Draw an arrow to show the given number of minutes.



5 minutes



45 minutes

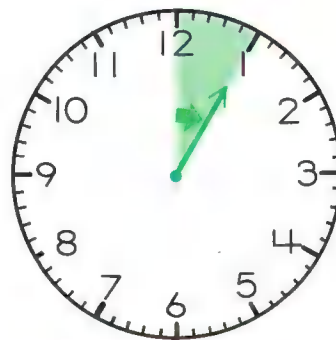
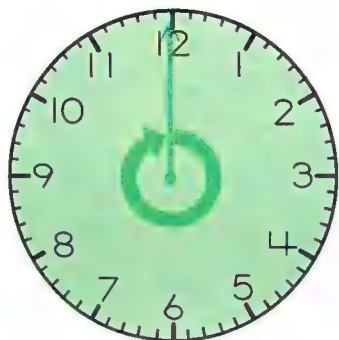


30 minutes

Hours on a Clockface

60 minutes measure the same time as 1 hour.

When the minute hand moves once around the clockface —
the hour hand moves from one numeral to the next.



For each clockface write the numerals that name the time.



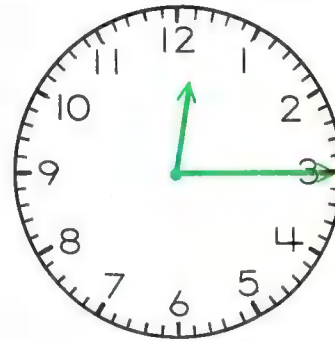
twelve o'clock

12:00



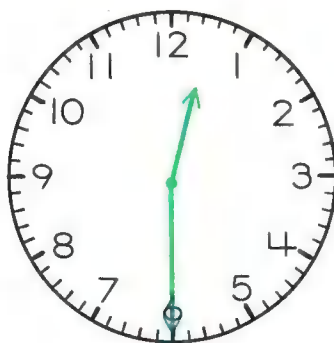
twelve-ten

12:10



twelve-fifteen

 :



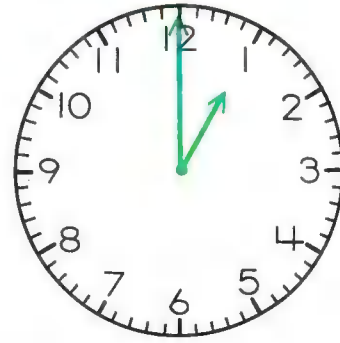
twelve-thirty

 :



twelve-fifty

 :



one o'clock

 :

Telling Time

For each clockface write the numerals that name the time.



2:00



2:15



 :



 :



 :



 :



 :



 :



 :



 :



 :



 :

Past the Hour—Till the Hour

From 12 to 6 on a clockface shows **minutes past** the hour.
The other half of a clockface shows **minutes till** the hour.



25 minutes past 8

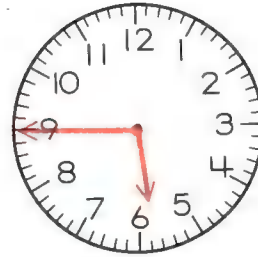


10 minutes till 12

For each clockface write the numerals that name the time.



_____ minutes past _____



_____ minutes till _____



_____ minutes past _____



_____ minutes till _____



_____ minutes past _____



_____ minutes till _____

150 (one hundred fifty)

Telling Time

A quarter of an hour means $\frac{1}{4}$ of an hour or 15 minutes.

Compare the time given with the colored part of the circle.



a quarter past 5

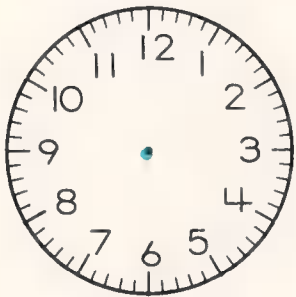


half past 5

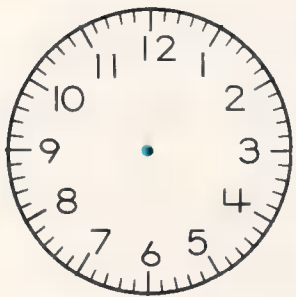


a quarter to 6

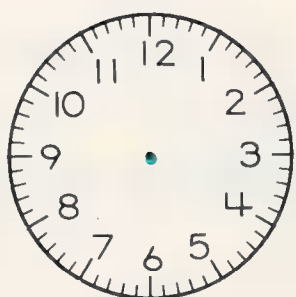
Draw both hands on each clockface to show the time given.



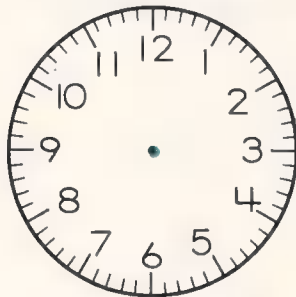
half past 7



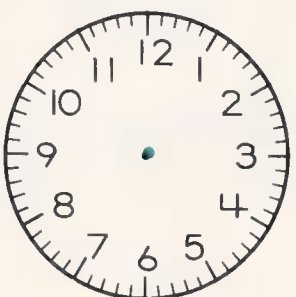
a quarter to 10



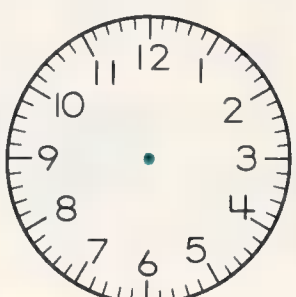
a quarter past 8



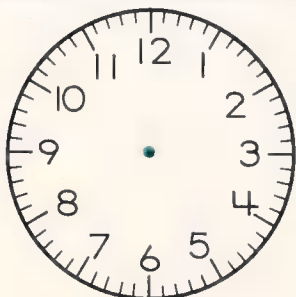
a quarter to 12



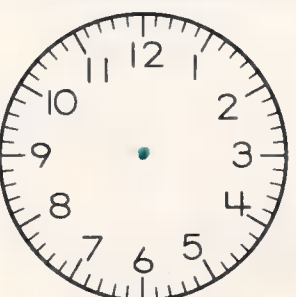
half past 11



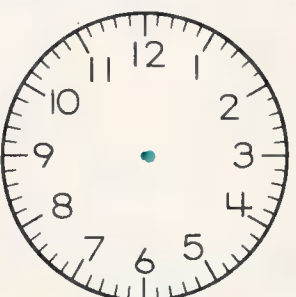
a quarter past 9



a quarter past 1



a quarter to 4



half past 3

Solving Problems

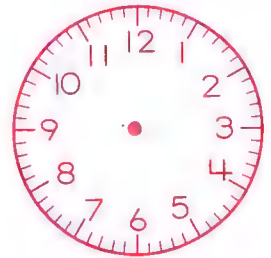
Find the answer for each word problem.

Use a clockface to help solve each problem.

1. The pupils go out for recess at 10:30. Recess lasts 15 minutes. At what time do the pupils come in again?

10:45 or a quarter to 11

Work space



2. Bill left home at 8:50. He got to school at 9:00. How many minutes did it take Bill to get to school?

 minutes



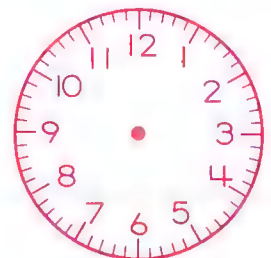
3. It took 20 minutes for Jean's father to drive home from his office. He got home at 5:45. At what time did he leave the office?

 : or minutes past



4. Jerry went to Mark's house at 3:30. Jerry left Mark's house at 4:00. How long did Jerry stay at Mark's house?

 minutes or hour



Money

Penny



1 cent

1¢

Nickel



5 cents

5¢

Dime



10 cents

10¢

Quarter



25 cents

25¢

For each set write a numeral telling the value in cents.



¢



¢



¢



¢



¢



¢



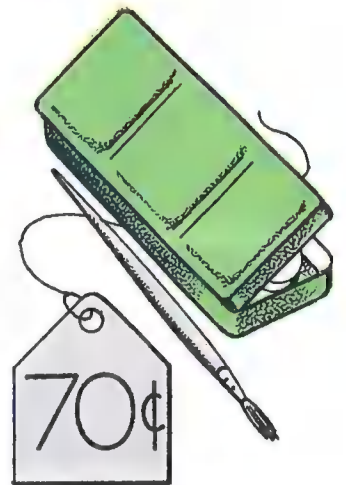
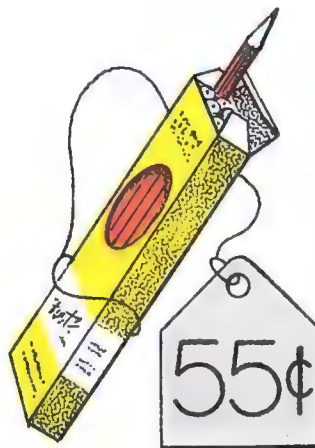
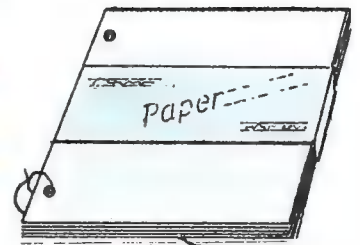
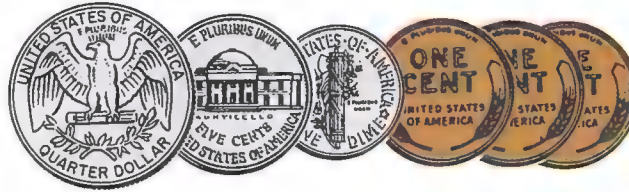
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¢

Using Money




Draw a line from each price tag to the correct set of coins.



You have dimes, nickels, and pennies.

Write numerals in the table to show in six different ways how many of each kind of coin you need to pay for the toy.



	—					
	—					
	—					

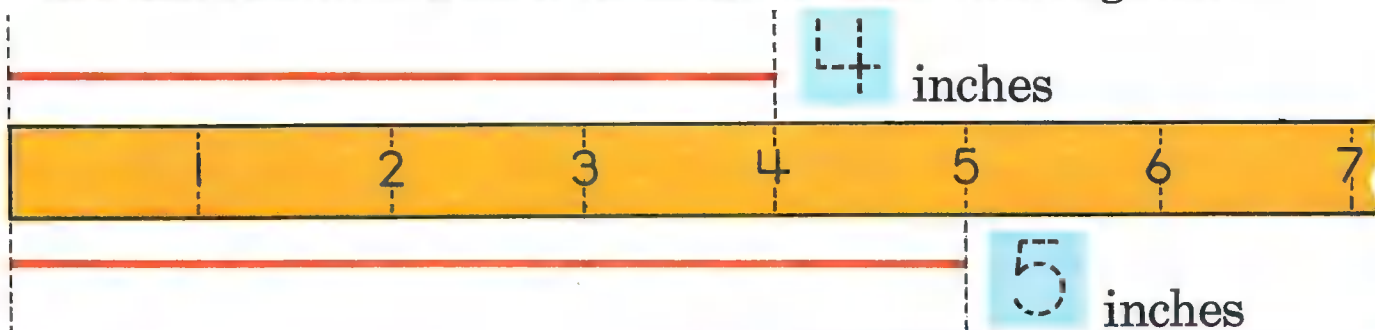
Making Change

Draw a ring around the correct amount of change.

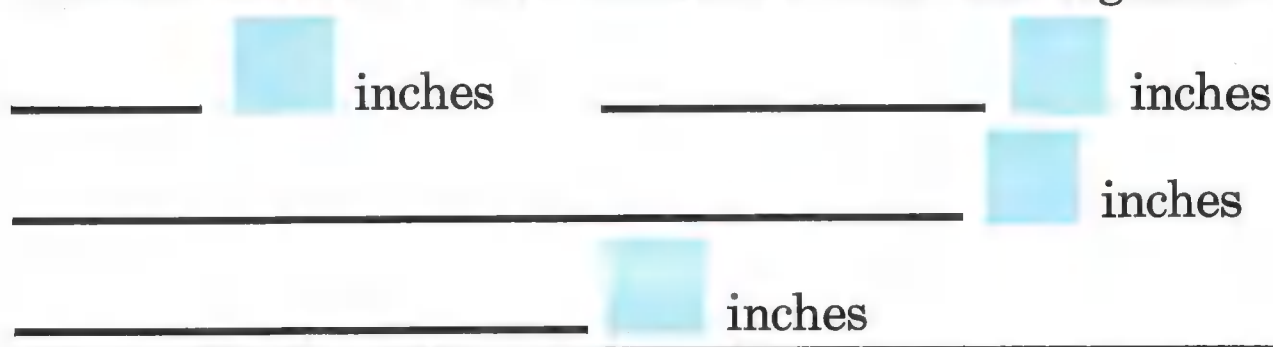
Item	Paid	Change
 		
 		
 		
 		
 		

Linear Measure—Inch and Foot

Find and record the inch measure of each line segment.



Find and record the inch measure of each line segment.



Write a numeral or a word to answer each question.

How many inches are shown on your ruler? _____ inches

Roger's ruler is 12 inches long. It is 1 **foot** long.

1 foot measures the same length as 12 inches.

How many inches long is this page? _____ inches

Is this page 1 foot long? _____

Is your ruler 1 foot long? _____

How many inches does 2 feet measure? _____ inches

Which is longer: 10 inches or 1 foot? _____

Which is longer: 15 inches or 1 foot? _____

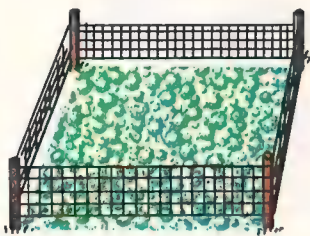
Solving Problems

Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1.

This garden is in the shape of a square. Each side is 8 feet long.

How many feet of fence are used?



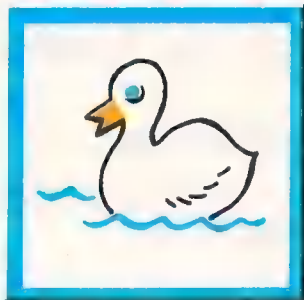
$$\begin{array}{r} 8 + 8 + 8 + 8 = \boxed{} \\ 4 \times 8 = 32 \\ 32 \text{ feet of fence} \end{array}$$

Work
space

2.

Anne made a picture in the shape of a square. Each side is 6 inches long.

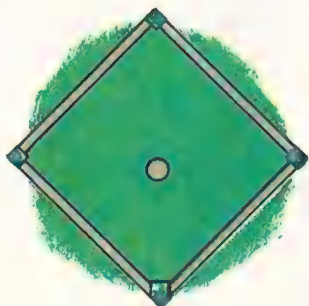
How many inches is it around the picture?



$$\begin{array}{r} + + + = \\ \times = \end{array}$$

3.

A softball diamond has the shape of a square. Each side is 60 feet long. How far must you run to go around all the bases?



$$\begin{array}{r} + + + = \\ \times = \end{array}$$

Liquid Measure

Study these units of measure.

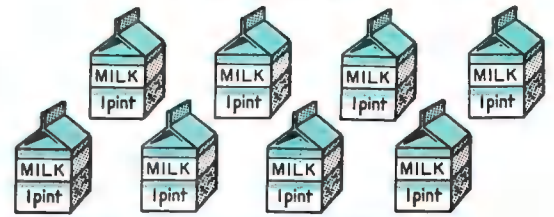
1 gallon



4 quarts



8 pints



2 pints measure the same amount as 1 quart.
4 quarts measure the same amount as 1 gallon.

Write the correct numeral in each blank.

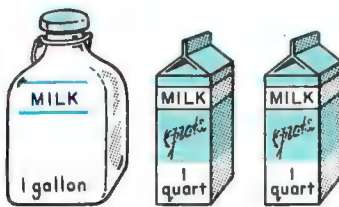
_____ pints measure the same amount as 1 gallon.

_____ gallons measure the same amount as 8 quarts.

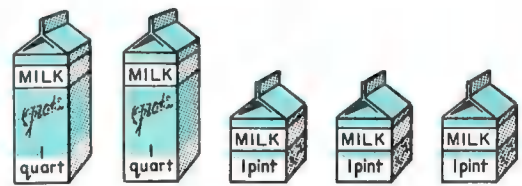
_____ pints measure the same amount as 1 quart and 1 pint.

_____ quarts measure the same amount as 2 gallons.

Write numerals in the blanks to tell the total amount.



_____ quarts



_____ pints



_____ pints or
_____ gallon and 1 quart



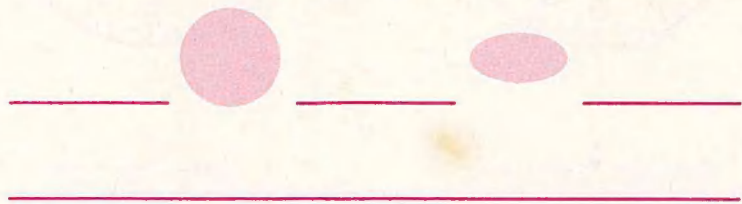
_____ pints or
_____ quarts and 1 pint

Solving Problems

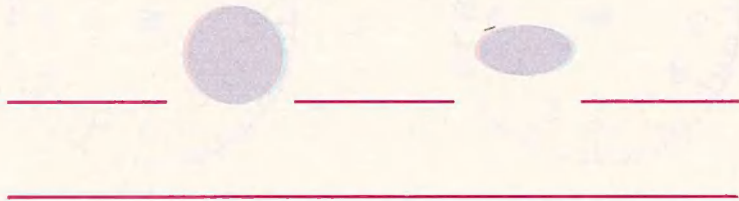
Read each problem carefully. Write an open sentence for it. Solve the open sentence. Write an answer for the problem.

1. Tom's mother bought 1 gallon of milk. The family used 1 quart of the milk for dinner. How many quarts of milk were left?

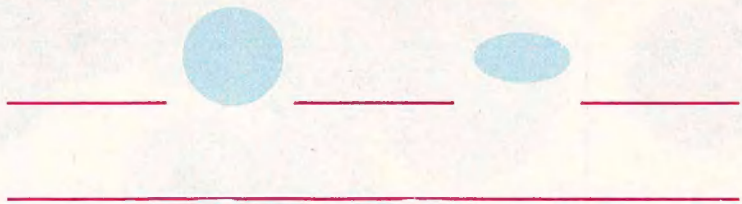
Work space



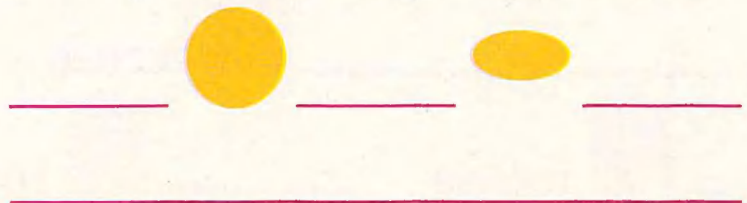
2. James had 32 feet of string for his kite. Gene had 29 feet of string. How many feet of string did they have in all?



3. Jane's mother mixed 1 pint of lemon juice with 3 quarts of water. How many pints of lemonade did this make?



4. Patty measured the length of her desk and said it was 1 foot and 9 inches long. How many inches long is her desk?



Checkup Time

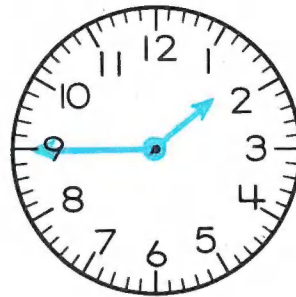
For each clockface write the numerals that name the time.



____ : ____

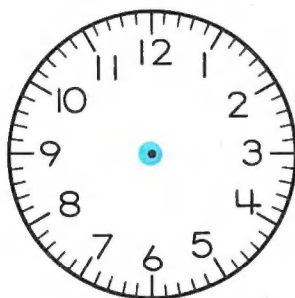


____ : ____



____ : ____

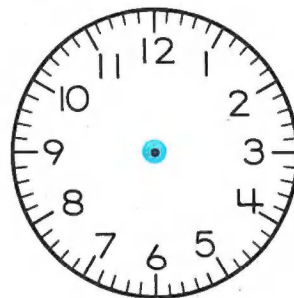
Draw both hands on each clockface to show the time given.



half past 2



a quarter past 11



a quarter to 7

For each set write a numeral telling the value in cents.



¢



¢

Find and record the inch measure of each line segment.

_____ inches

_____ inches _____ inches

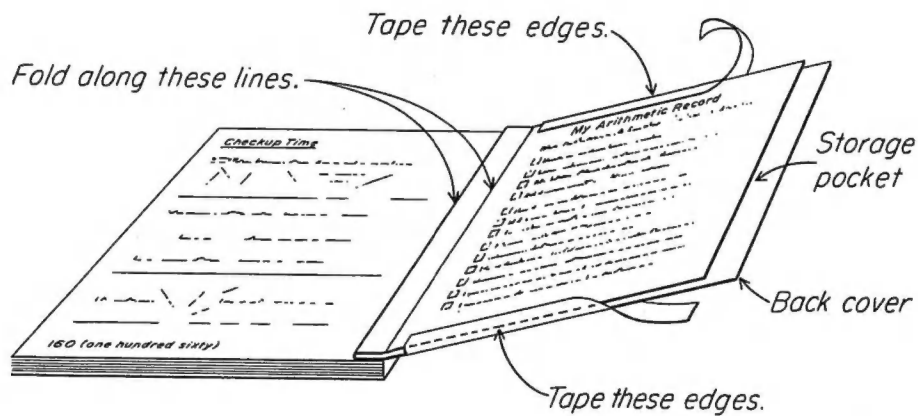
160 (one hundred sixty)

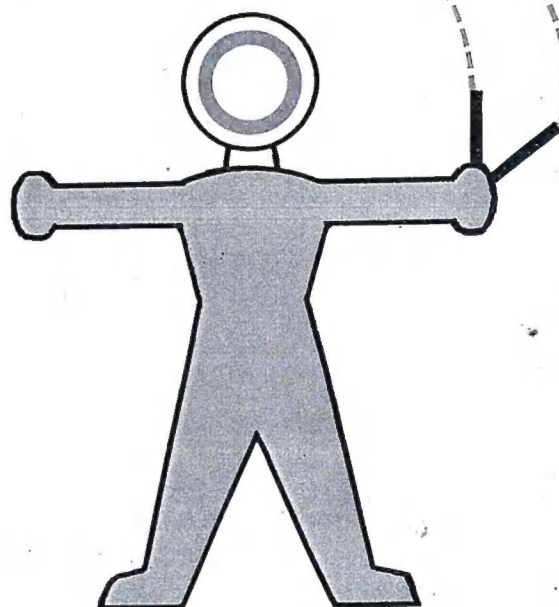
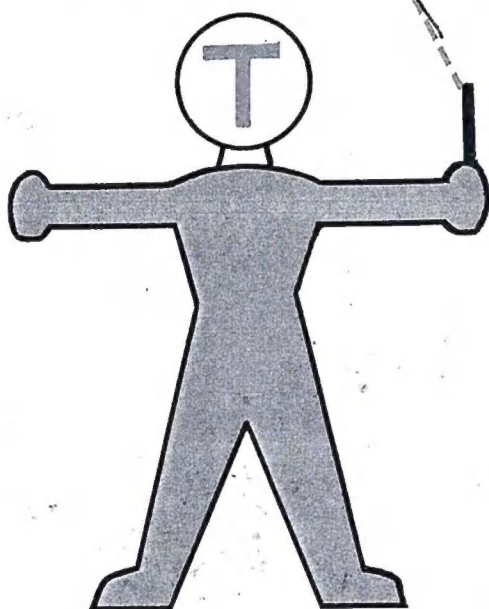
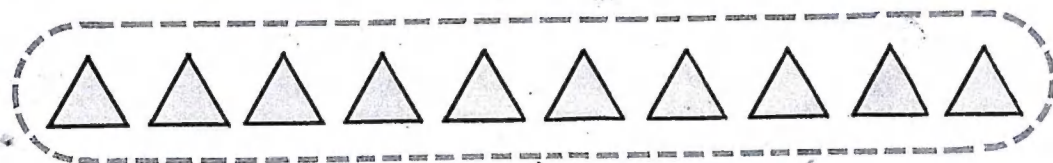
Instructions for Making A STORAGE POCKET

Remove the COUNTING MEN and NUMBER STRIPS — NUMBER LINES sheets along the perforations.

Have the pupils remove the counting men and their fingers and also the number strips and number lines as directed on the corresponding sheets. Provide each pupil with two envelopes for storing these materials.

Refer to the drawing below for instructions of how to fold the facing manila page so that it can be taped to the back cover to form a pocket for storing the envelopes containing the Counting Men and Number Strip materials.





LAIDLAW BROTHERS